READYING MICHIGAN TO MAKE GOOD ENERGY DECISIONS

Michigan Energy Public Forum

DETROIT

Monday, March 25, 2013
1:05 p.m. - 6:15 p.m.

NextEnergy
461 Burroughs Street
Detroit, Michigan 48202

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Introduction: Jean Redfield, President and CEO of NextEnergy
Steve Bakkal, Director, Michigan Energy Office
John Quackenbush, Chairman, Michigan Public Service Commission

Presentations: Energy Innovation Business Council - Dan Scripps, President

St. Vincent De Paul - Bill Brazier, Executive Director

Marathon - Jennifer Steiner-Burner, Energy Supply Analyst

Detroiters Working for Environment Justice - Guy Williams, President and CEO

Energy Choice Now - Wayne Kuipers, Executive Director

THAW - Susan Sherer, CEO

DTE Energy - Nick Khouri, Vice President of Regulatory Affairs

Ford Motor Company - George Andraos, Director,

Michigan Energy Efficiency Alliance - Stacy Paradis, Deputy Director

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REPORTED BY: Lori Anne Penn, CSR-1315

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At 1:05 p.m.

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JEAN REDFIELD: If you'll all take a seat, both here in the auditorium and in the atrium. For those of you in the overflow spaces in the atrium, if you'd prefer to be in the auditorium, feel free to come on in at this point.

I'd like to introduce myself. I'm Jean Redfield, I'm the president and CEO here at NextEnergy, and I'd like to welcome you all to the Energy Forum this afternoon. We're very pleased to be able to host this event for the State Energy Office and the Michigan Public Service Commission. I apologize for the fact that we don't have a single space large enough, but we feel like the center is such a unique place, having the Forum here was worth dividing it into two separate places.

The way the day's going to work is the speakers and the public comments will all be made from the auditorium, and it should be broadcast in the atrium so you all should be able to see and hear what's happening in the auditorium.

Anyone who is a confirmed speaker, if you're not in the auditorium now, please proceed and join

us here. If you have signed up for public comment, your names will be announced and you can come on into the auditorium at that point, or if you're already here, that would be even better.

Again, I want to extend a warm welcome from the NextEnergy Center. We're here as a primary asset from the State of Michigan, we help to incubate and accelerate advanced energy technologies in Michigan. And we're very pleased to have all of you here today.

At this point, I'll turn it over to the real hosts, Steve Bakkal and Chairman John Quackenbush from the State Energy Office and the Michigan Public Service Commission. Thank you.

STEVE BAKKAL: Good afternoon, everyone. And thank you, Jean, for the warm welcome, and thank you for hosting us and all the staff at NextEnergy for putting on such a great event for us. It's great to see such a great turnout.

Again, my name is Steve Bakkal from the State Energy office, part of the Michigan Economic Development Corporation. On behalf of the Chairman of the Michigan Public Service Commission, Mr. John Quackenbush, and myself, we'd like to welcome you to our fifth Michigan Energy Forum as we continue our process to ready Michigan to make good energy decisions.

As many of you know, the Governor this past November gave his energy and environment address where he talked about the three pillars of a sound energy policy; that of reliability, affordability, and a protected environment, all built on a foundation of adaptability. And at that same message, he also talked about 2013 being the year that we engage with our policymakers and our legislators to gather input, facts and information that are needed in three specific areas that guide much of our energy policy today; that of energy efficiency, renewable energy and Electric Choice, or other additional areas that should be considered as well. Which brings us to the reason why we're here today.

This past January we announced the input phase of this process that the Governor laid out. We'll be gathering this information through two primary methods; one of which is these forums, and the other of which is the website that we've developed at michigan.gov/energy. The website is going to be open for comments and submissions until April 25, and I'll talk a little bit about the kinds of information we're look for there.

When you go to the website, you'll notice a series of over, close to a hundred questions now, we've

actually added some recently, focused on these three topic areas; many of them are very specific in nature, asking for very detailed information, studies and facts that are available, but generally it can all be summarized by these two general questions: First, what information do our energy policymakers need to consider in order to make good energy decisions? And second, what existing data or studies are available that our policymakers can utilize? So what you won't see on the website are things that are asking for specific policy recommendations. We're not asking what our specific targets should be or what policies the state should enact, or if we even should have certain targets in these areas, we're asking for the underlying facts that are needed for our policymakers to make those determinations.

Again, we're also utilizing these forums to gather this information. The format of these forums will be similar to what we're doing today. We're going to have two additional ones going through the end of April in Marquette and Traverse City. We'll start off the day with a set of presentations from some of the major stakeholders that we have in the state that will attempt to address the questions that we've posed on the website from their viewpoint.

All the presentations that you will see

here today are going be to available on the website, all the past presentations from the previous forums are also available on the website. You will notice every forum had different sets of presentations, different sets of information. Also, the public comments will be made available on the website. We do have a court reporter with us today that's taking down all the recordings from the complete forum, so a transcript of that will be available on the website as well.

So what are the next phases after this input phase? At the end of April, in the May through June timeframe, the Chairman and myself will start compiling this data and looking at what other information we may need. We understand that through this process, we'll get a lot of answers, but there may be some that we may still need to go out and develop. In the July-September timeframe, we'll start to compile the reports. October-November, we'll actually release the draft copy of the report on the website, also making it available for public comment as well. The way the website is set up, it's very interactive, so if you see information that's there that's been posted as a response to the questions and you have better information, we absolutely encourage you to submit that. So the same thing will happen with the draft report that we're going

to post; have a chance to review that, you have better information, corrections that need to be made, absolutely submit that. The November-December timeframe, we will release the final report, and it's anticipated that the Governor will utilize this report to announce and develop his own energy, comprehensive energy policy at the end of the year.

With that, let me ask you to join me in introducing Mr. John Quackenbush. He's going to talk about these specific areas and where we are today and some of the work that the Public Service Commission has done in these areas. Please join me in welcoming John to the stage.

JOHN QUACKENBUSH: Well, good afternoon. We've asked for data, studies, reports, documents, studies, anything that's out there is coming in, the website is getting populated with that, and I know there's more on the way. The website will be open through April 25. But we know some things already, and where are we starting from? Well, I'm going to show you a few slides about some data that we've already gathered at the Michigan Public Service Commission and have already put out there in reports.

First slide is about energy efficiency, specifically electric energy efficiency. We've had

targets that we've been shooting for since 2009, and we are comparing here, we're -- there's two things going on in this slide. If you look on the right-hand side first, we've been ratcheting up the target every year; this was set legislatively. We started with a modest .3 percent in '09, and worked our way up to where we're at 1 percent in 2012. That 1 percent, this is a targeted savings, will stay there if nothing else is done. And so part of what we're looking for is good information that will help us set targets, or help the legislature set targets as to whether it should be raised, decreased, kept the same. How have we done versus those increasing targets? Well, we've beaten the targets every year as a state. You can see, comparing the bars on left-hand side, the bars are going up, and the actual bars exceed the targets in every specific year. This data is on the website as well as on the Michigan Public Service Commission website and the Energy Efficiency Report that we put out once a year, this one's due November 30th every year.

I'm going to show you the same type of information about gas energy efficiency. Again, we've had increasing targets year-by-year, and we've beaten the target in all the past years.

So where can we go from here? One thing that we found is that taking 2011 as an example year,

combined for electric and gas, we've made energy optimization expenditures of 205 million, and based on the best calculations that we have, that leads to lifecycle savings of $709 million for customers. So we're getting more than 3 1/2-to-1 of a payoff on the energy optimization expenditures. We calculate that if we compare that to the energy that's avoided, it's the equivalent of paying $20 a megawatt hour for electricity, which is lower than any other generating source, any generating source that we have.

So let's move on to renewables and take a look at this chart. Again, we have a 10-percent by 2015 target that we've been building towards. You can see we've made good progress. Those upwardly progressing bars to the right shows that we are increasing our percent every year, and we're on track to hit 10 percent by 2015.

Now, how do these costs compare? In this report, Renewable Energy Report which is due every February, we just recently prepared one, and in there it shows that our weighted average cost of renewable energy on a levelized cost basis is a mid 80s per megawatt hour, $85, right around there. That's weighted average to date; however, this cost has been declining. The most recent costs that we've seen are in the low 50s, so

there's been good progress. I think those costs are lower than what was contemplated at the time the 2008 legislation was adopted. So that's been good news. That compares to an embedded cost of all of our existing generation for all fuels in the mid 60s, somewhere around $64, that's what customers are currently paying in rates. And if you look at the estimated cost of a new gas-fired generating plant, that comes out also in the mid 60s. So those are all numbers we're interested in comparing and, you know, we're interested in your comments on those numbers or any better numbers that you might have that you can present to us.

Electric Choice, the third issue. There's a 10-percent cap. Customers that want to select an alternative energy supplier can put their name in a queue and wait their turn. We've hit the cap. There's been times in the past we've been below 10 percent, there's been times we've had demand greater than 10 percent, like currently. And if you look at the two tables of numbers on this slide, if you look at the bottom right-hand corner of each table, it will show you an interesting number, which is what would the participation be in Electric Choice without a cap; in other words, if we were to just immediately pretend the cap wasn't there or immediately remove it, where would

our customer demand go? And here you can see at the end of 2012, the answer was 24 percent in the case of Consumers Energy and 21 percent in the case of Detroit Edison, our two largest utilities.

From the same report, the Electric Choice report, we showed a few rate comparisons, and we're seeking information that will help us determine what the best way to look at these numbers are. As you can see, this is just Michigan compared to several midwestern states that surround us, Michigan has generally been in the top half of rates, and this is for residential customers, and by the middle of the last decade had drifted to be roughly in the middle of the pack, an average, and then it worked its way back into the upper half, and now we are, in 2012 Michigan has the highest rate for residential electric rate. So we're seeking information, we know some reasons why that is, there's a number of reasons, I think, and we're looking to identify a comprehensive picture of that.

Same chart again, except this is industrial rates. Very similar story, so I won't really dwell on this slide. But this shows you some data that we're starting with. And, you know, there's different ways to process it, you might have some other information, please come and share it.

We're looking forward to your comments today and we're looking forward to your postings on our website. So let me turn it back to Steve to continue on.

STEVE BAKKAL: Thank you, Mr. Chairman.

Before I introduce our first speaker, I want to quickly go through the activities for the rest of the day. Again, we're going to have today nine presentations from our major stakeholders, approximately five minutes each. We'll be taking a short break after that, and then we'll be opening it up for public comment as well. We are scheduled to be here until 5:00, but we are prepared and I believe NextEnergy is prepared to let us stay a little longer than that. In the past, we've received anywhere from 42 to 80 requests to speak. Just to let you know, we haven't been able to get through every single one, but we do make our best efforts to do that. The website is open for submissions, there is no different weight given for public speakers versus what the information is provided on the website.

At this point, I'd like to open up for any legislators that are here in the audience that may want to say a few words. I didn't recognize anyone offhand, but if there's anyone here that would like to say a few words, a member of our legislators? No. O.K.

Well, with that, I'd like to introduce

our first presenter today, Mr. Dan Scripps, President of the Energy Innovation Business Council. Please join me in welcoming Dan to the stage.

DAN SCRIPPS: Thank you, Director Bakkal, Chairman Quackenbush. My name is Dan Scripps, I'm the President of the Michigan Energy Innovation Business Council. We are a trade association representing the full suite of advanced energy companies in Michigan. We also have a not-for-profit sister organization, the Institute for Energy Innovation, whose mission is to promote a greater public understanding of advanced energy and its economic potential for Michigan.

As I mentioned, we represent the full suite of advanced energy across the state, including efficiency, wind, solar, bio energy, transportation, so trying to take a comprehensive broad view approach of what advanced energy is and how it impacts the Michigan economy.

I want to lay out a couple of key themes that I hope to cover today. We spoke in Grand Rapids and focused on costs and economic development issues relating to the renewable energy standard and the energy optimization standard, so I won't be speaking on those today, but focusing more on how a balanced approach considering both supply and demand can improve overall

system reliability and reduce costs, how the variability of both supply and demand is an issue that can be managed successfully, the integration of risk considerations into the decision-making process, and respectfully, why the timeline for this process should be accelerated.

So to start, it's important that we think about the whole system, and too often I think that we focus on, almost exclusively on how power is supplied. A focus on supply leads to a number of mistakes in analysis and policy. For example, we think of electricity as having a common cost because that's what shows up on our bill, and that hides that the cost of certain load at peak times is significantly, significantly higher, as I'll show in the next slide; and we don't ever ask, you know, is that a cost that ratepayers are actually willing to pay, or can we look at both supply and demand in a balanced approach and find perhaps a better way forward.

So how you would integrate this balanced approach looking at both supply and demand would incorporate demand-side strategies, such as time-specific pricing, comprehensive demand response, critical peak pricing, conservation voltage regulation, and load-shifting storage, and research suggests that integrating those strategies has a potential to produce net savings of between 7 and 11 percent of electricity

system costs. These practices are also far more compatible with the emergent (inaudible) generation of solar, of pluggable electric vehicles, grid-integrated power, et cetera, and so adopting an approach that is more balanced and looks at the demand side actually will not only help with costs and operations of the current system, but pave the way for where I think a lot of people expect that we'll go.

Finally, proper pricing in this context to end users would actually make our incumbent utilities more competitive with alternative suppliers, so regardless of how the debate over Electric Choice shakes out, this would eliminate cherry-picking customers who have load profiles that are easier and cheaper to serve.

So the big question, turning from demand to supply again, and specifically looking at renewables, is variability. Much of the discussion around renewable energy has been concerned with the variability of electric production or -- and tell me if you've heard this before -- that the wind doesn't always blow and the sun doesn't always shine, and isn't that a problem. But critics argue that the intermittency and the variability of renewable makes them inherently unreliable when you point to variability charts like this one, except that that's not actually what that chart shows. This shows

the variability not of supply, but of demand, because electricity has always been variable. We don't run our lights or our appliances 24/7, and we've been able to, by taking a step back and looking at how we manage that variability, to make a system that actually works. So understanding that energy is a system with both supply and demand inputs allows us to better manage the variability of both generation and use.

In fact, some renewables like hydro and methane digesters are base load, while others are putting solar generating most at points of highest demand. So if you look at the chart on the left, that's the current use, so all the way to the left you see that there are times where we -- and these are the highest system peaks of the year -- where we use a lot and we serve those with peaking plants; the red bar shows where we are using load quality plants; and then the blue is base load. The chart on the right shows what happens if you integrate 10-percent solar into that. And what happens is you see less base load, less peaking, more renewables and more load following. In fact, a 2012 report from the National Renewable Energy Laboratory demonstrated that despite the variability of renewable resources, reliable electricity supply can be provided with a mix of 90-percent renewables. Let me say that again. For all the talk

that we hear about concerns about variability and intermittency, we can get reliable electricity supply with a mix of 90-percent renewables.

I referenced this next chart in my presentation in Grand Rapids, and it's a chart from a recent series report on managing risk in utility regulation. Although the cost estimates that are here are already out of date because of the rapid decline in renewable costs, the basic conclusions are still about right. The lowest-cost and lowest-risk option is energy efficiency, and we commend Governor Snyder for recognizing in his environment and energy message that energy efficiency is a the best example of a no-regrets policy Michigan can have.

Among those generation options have led to the option of wind, combined-cycle natural gas is low cost and low risk, as you see, it's concentrated in the lower left corner, and solar is actually better than it looks here because, again, it produces most at times of peak demand.

When you dive a little deeper into the generation choices, one particular conclusion is that most of the risks are caused or exacerbated by largeness. Research from Bloomberg New Energy Finance suggests that we can best address risks and uncertainties by committing

capital in smaller increments, preserving resilience, optionality and gaining intelligence, and one way that you can do this is actually by including wind. This graph shows a -- comes from a recent report by Lawrence Berkeley National Laboratory, and suggests that wind is a valuable investment in cost-risk avoidance, even if we only credit it with natural gas fuel savings and don't look at any other of the costs. And that's even more true in Michigan, because our wind prices are about the same as the national average, but because of delivery costs, our natural gas prices are slightly higher.

I'm going to skip this in the interest of time.

The last point is really about the need to accelerate the decision-making timeline, because the absence of a guided policy will cause an unnecessary pause in development, similar to what we saw, uncertainty over the extension of the production tax credit. I was working on a wind deal last March and we wanted to make sure that the financing was in place a full nine months before the end of the year because that's the decision-making timeline. If we get to the point where we're not sure if we're going to go above 10 percent by 2015 and have to wait three years to find out, that's going to cause a real dropoff in deployment and could hurt

Michigan business, could have people who have been trained over the last several years in implementing the renewable energy standard actually look for other places to go. That would actually be exacerbated if we made large investments in regulated central generation in the meantime because that would foreclose options for more use of efficiency, more renewables and more competitive supply. So accelerating the process we think is critical for managing (inaudible) and ensuring a no-regrets energy policy.

So I'll conclude with a couple of, a couple of additional policy challenges, and in the interest of time, I'm not going to try and provide answers, but just put these on the table as additional things to include.

From a risk perspective, how do we shift risk to the decision-making utility and improve the ability of the Commission to include risk considerations in its decisions?

How can we incorporate the efficiency resource that the utility business models so that efficiency will receive appropriate emphasis, so that utilities actually see that as profitable, as being as profitable as new generation?

How can we reinvent rate design in a

regulated environment to discourage utility price discrimination, customer cherry-picking and cost shifting in retail competition?

Can we reform anticompetitive utility and regulatory barriers for renewable and distributed generation without retail Choice? So we talk a lot about Choice for a number of reasons, but can we, if we stick to a regulated environment, can we remove some of those barriers?

And finally, in the foreseeable future, looking at cost trends and what's happening in other places, distributed generation, especially from solar, will be cheaper than grid power. Storage and micro-grids will follow soon after. So how do we anticipate that? How do we get out in front of it and correct and fix the current business model before the current one breaks? And are we going to actually make our, put ourselves in the hole by making additional large invests that will become stranded assets for which we must pay?

These are obviously large questions. And on behalf of the Institute for Energy Innovation, the Michigan Energy Innovation Business Council, and our members, we look forward to working with you to find answers that work for Michigan. Thanks very much.

STEVE BAKKAL: Thank you, Dan.

Our next presenter is Bill Brazier, Executive Director from St. Vincent dePaul. Please join me in welcoming Bill to the stage.

BILL BRAZIER: Director Bakkal, Chairman Quackenbush, ladies and gentlemen, at the recent election of our newest Pope Francis, one of the first things he said was, "Remember the poor". And today I want to just share with you some of the things that St. Vincent dePaul is doing to help people and remind them about working with those who live in poverty.

St. Vincent dePaul is a Catholic lay organization, we're a provider of basic human needs to vulnerable clients in southeast Michigan, we've been doing this for over 127 years, through home visits, with our food pantry, soup kitchens, thrift stores, we have a dental clinic, a youth summer camp, we provide clothing, furniture, medicine, medical bills, help with rent, energy assistance and more. We do this through a network of over 3,000 members in southeast Michigan, plus countless others statewide.

Since 2006, our tradition of assisting with energy bills was augmented thanks to the Low Income Energy Assistance grants from the Michigan Public Service Commission. Last year, our energy assistance network, we expanded to 31 counties at the grassroots level,

disbursing over $1 1/2 million through the Vulnerable Heath and Warmth Fund and other funds to over 1,200 households statewide. In 2013, we anticipate disbursing over 2 million in utility assistance.

Give you a couple cases of people that we see, this is fairly typical of those who live in poverty and our neighbors who come us to.

Michelle has four children under the age of 16, two of whom have disabilities. She was forced to move out of the home and take the children because of an abusive husband. She has SSI of $17,000 per year, plus food stamps and Medicaid. Her husband does not pay any child support. She's struggles to pay her bills. We assisted her with overdue energy in the amount of $2,336.

A second case. Mary is age 63, she has custody of a 19 year old granddaughter with health issues, who the mother of does not want to support. Mary receives Social Security and works part time for, earns $28,000 a year. She has no food stamps or any other assistance from the Department of Human Services. She worked for over 30 years, and has not received a pension since 2009 because there was -- her pension was wiped out during the stock market crash. We assisted her with her overdue energy bill of over $1,970.

The Society of St. Vincent dePaul is

embarking on a program we refer to as systemic change. We're committed to ending poverty in the United States. We're part of a world-wide family known as the Vincentians who do this work, and we see systemic change as the mean to achieving this goal.

There's four building blocks around systemic change: Empowerment, mentoring, collaboration, advocacy.

In terms of empowerment, it's empowerment of our members through education in the realities of poverty and its solutions, as well as empowerment of those we serve to provide opportunities to identify and claim their ability to make positive changes for themselves and for their communities.

In terms of mentoring, mentoring is key to gaining and maintaining the motivation and support for change, so we'll work with our neighbors side by side. It used to be we just provided handouts; here's a bag of groceries, here's help with utilities, here's help with rent; but now we're going to stay with them much longer in a mentoring relationship to help them and give them the support they need to make the changes.

Collaboration. We want to collaborate with others who share our commitment to ending poverty and transforming lives. The Society alone we know can

not end poverty. Working together with others offers hopes for transformative solutions.

And advocacy. Advocacy to change and adjust systems that are barriers to escaping from poverty for individuals and for communities, and to create opportunities for meaningful lives for those who struggle now.

The Low Income and Energy Assistance Program is a vital component in financial intervention as we work with our clients to move them out of poverty to household stability through the just-mentioned systemic change model. The state and federal support is crucial to achieving this vision.

Thank you very much.

STEVE BAKKAL: Thank you, Bill.

Our next presenter is Jennifer Steiner-Burner, Energy Supply Analyst from Marathon. Please join me in welcoming her to the stage.

JENNIFER STEINER-BURNER: Thank you. I'm Jennifer Steiner-Burner from Marathon Petroleum Company. I've come here to today talk about electricity prices and how that impacts industry in the State of Michigan.

Just to give you a little background on who Marathon is, we have four refineries up in the midwest, and we have three down in the gulf coast; the

four in the midwest are located in Ohio, Kentucky, Illinois, and also Detroit. This is Detroit, it's the last refinery in Michigan. And three in the gulf coast are down in Texas City, two of them are there, and one in Louisiana. We also have a grouping of pipelines and terminals that connect all of our infrastructure together, and we also own 1,460 Speedway gas stations, 300 of those being located up in Michigan here.

Just a little bit about the Detroit Heavy Oil Upgrade Project. We invested $2.2 billion here in Michigan over the last four years, from 2008 through 2012, and the centerpiece of this project was the new coke and distillate hydro-treater. This project was just completed, and an important factor of this plant expansion decision in 2006 and 2007 was the opportunity for Electricity Choice in the State of Michigan; however, in 2008, after our project was already started being built, there was PA 286 passed and a 10-percent cap was put on Choice, and that really kind of limited our ability to move the facility then to Electricity Choice when it came on line.

So let's talk a little bit about the current situation of electricity rates in Michigan. How do Michigan electricity rates compare? What has happened since the passage of 286 in October 2008? And what is

Michigan's electricity policy solutions to high electricity costs going forward?

You might have seen this graph in some previous presentations that were given on how do Michigan rates compare. On the basis line here, you have the U.S. average of electricity rates, and can you see from 1990 to 2000, Michigan's electricity rates are higher than that, than the average U.S. rates, and that was one of the reasons that we went to Electricity Choice back in 2000-2001 timeframe with the passage of PA 141, and also the passage of PA 142, which was wherein the utilities securitized about $2.2 billion worth of their nuclear assets stating that they weren't marketable at the time.

So when 2001 passed, all of a sudden you'll notice that the electricity rates dropped. There started being some competitive pressure put on the utilities, and you can just see that that is definitely what is needed in the State to make them want to keep their customers. And even at that point in time, Detroit Edison and Consumers Energy, they went out there and they were competing against each other. With our Detroit refinery, we did business with one of Consumers Energy's subsidiaries, and the same thing was happening with DTE, they were out there competing for rates, which lowered the cost overall.

Then again let's look now at 2008-2009 when PA 286 was enacted and the 10-percent cap was put into place. You'll see that rates once again have started to go up above the level of the U.S. average.

I borrowed some charts from the Commission, and also they got these I believe from the U.S. Energy Information Administration, and this just kind of gives you the midwest states and how the electricity rates compare; and while Michigan has always been higher than some of the other states, you can see how it started to break away in 2011 and 2012 on the rates.

We also graphed the commercial rates, which would be like for our Speedway stores, and you can see the same thing, that Michigan is in the red line and its rates continue to be quite high compared to the other states around. And I think some of that is because we just don't have any options in Michigan, you're pretty much on the tariffed rate, and some of the other states around us, like in Ohio, you actually can go out there and utilities bid to be the provider of last resort. So even if you don't shop, you're getting a very competitive rate in the State of Ohio by having some of those different systems available for the utilities to compete against each other.

And then the last graph on this from the USEIA is the residential rates. And what I wanted to comment on this one, you can see Michigan's right around 14 cents. Where I live, which is hundred miles south of here in Findlay, Ohio, you see we're closer to like the 11 1/2-cent rate. I'm shopping, we're able to shop as residentials. I know we don't have any shopping in Michigan now in the residential load, but I think if you opened the cap and looked at that, people, there would be aggregation programs. And it's very transparent, you save right around 2 cents per kWh right now. And I just listened to the presenter before me, and things that you could possibly do for the residents of Michigan is you could put more money back in their pocket by having competitive electricity rates.

So we looked at it from the EIA, from the government's information, and then I also wanted to graph it from our company's perspective. And this is from our own internal reports: We've got all four of our refineries from the midwest, the red line is Michigan, and then Ohio is a kind of pinky-purple, and Kentucky is in yellow, and Illinois is in blue, and then I've also graphed Detroit Edison's bundled rate. And, you know, throughout the times, there's been -- you're allowed to have economic development rates, and when we put

investment in our facilities, we were able to get on to those tariffs; but those tariffs are going to go away with the passage of PA 286, and there will be cost-of-service rates, so there will be no longer any economic tariffs available. The 10-percent cap is full, so there's no opportunity to shop, so there's just no optionality for an industrial customer or any customer in the State to take on more risk to mitigate their increasing electricity costs. And what I want to really point to is look at the increase from 2011 to 2012, and, you know, I haven't put any of my cents per kWh on the axis here because this is confidential information, it is all fairly, it's all relative information, but just the amount of increases in Michigan is what is disturbing.

Then finally, the last way we take a look at this is Marathon participates in something called a Solomon Study, and we're part of the midwest refinery supplier corridor, and Solomon is a company that specializes in benchmarking and consulting services for refineries, and the area this is is for Minnesota, Wisconsin, Michigan, Iowa, Missouri, Illinois, Indiana, Ohio, Kentucky and West Virginia, and historically the Detroit refinery again has been ranked in the highest electricity cost tier for that refinery supplier corridor. And it just makes you pause and think, why are

we continually a highest cost, and how are we going to attract businesses with these high costs in this area?

So let's talk a little bit about what's happened since the passage of PA 286. And this one I took from all the orders from the Michigan Public Service Commission and laid it out in a way that Consumers Energy had laid out to their shareholders, and it just shows you since PA 286 was passed in 2008, that there's been a new electric case and a new gas case every year, and those have cumulated up to $500 million more in increased costs on an annual basis since 2008.

I also took DTE Energy's, did the same thing; not as many cases, only two electric and only two gas cases here, however, they do add up to even more than what Consumers is collecting and an additional $522 million annually. And so what that is is we've had an increase of about a billion dollars a year in electricity cases since 2008.

And what else has happened since the passage of 2008? I think, you know, when we were sitting there and it was on the edge of the recession, not realizing what was happening, we also didn't realize we were sitting on a radically revised outlook for natural gas with the shale booms that's happening in the Marcellas. And what you want to take a look at here is

the blue line, the green line, and the pink line at the bottom there, and it kind of shows you in 2008 timeframe where we thought natural gas prices were going to be. Then we take a look at it again in January 2010, and you're looking at $6.00 up to under $8.00. Now we look at it here in 2012 as we start seeing some of this Marcellas gas come on line, and you're looking at $4.00, and even in 2020 you're looking at under $6.00 gas. I mean this is really quite a revolution that's occurring here in the natural gas industry, and it's really going to bring about I think another industrial revolution for the U.S. if we're able to use this.

What's going to happen to electricity rates in Michigan? And here's some other things that have happened since PA 286 is the more EPA mandates and environmental costs. And Consumers Energy has already been talking a little bit about some of their costs going on, $1.1 billion investments they're going to have to make to their plants. They're also looking at building a potential new gas plant for $750 million, and I believe that case has already been filed and will probably be decided before this, we go through all of this look at the electricity restructuring, and so that could already be a given that that will be a non-bypassable charge by the time -- if we determine Choice will be available for

more customers. And then DTE Energy environmental costs are about $1.9 billion. So rates are going to be continue to go up. This is occurring in other utility territories, too; but there should be some type of competitive driver on who should build that next piece of generation. How do we keep the costs low as possible?

So Michigan's electricity policy solution to high costs? Well, there's a couple different things you could do. Increase Electricity Choice in order to get competitive electricity prices for Michigan customers. As you saw the graph they put up earlier, look at how many customers are in the queue. I know I have all my facilities in the queue, I want to save big dollars.

Ensure that -- another step you could take would be to ensure the regulatory process emulates that of a competitive market. This should be a key performance metric in order to keep Michigan on the same competitive grounds as other midwest states. For example, the return on investment: Where is that up in Michigan? Is it -- should it equal the midwest average utility ROI? And the cost of all available resources must be considered before a utility is granted a Certificate of Need to build new generation plants. And those are just a couple examples.

But I think we need to get creative, and Michigan needs to take a hard look at this and not do a slow walk on this one. You've been transitioning for 15 years now, and I'm concerned we're going to take another 15, and we're missing some of this natural gas that's out there available. And look at what Ohio's doing, look at what Illinois has done, and now Indiana is starting to talk about restructuring their markets, too.

And maybe it's not just an argument about do we want to be deregulated or regulated, maybe we need to be restructured in order to get this economy moving again; because I think competitive electricity rates will bring attractive business climate and it will continue to have investments in Michigan. Thank you.

STEVE BAKKAL: Thank you, Jennifer.

Our next presenter is Mr. Guy Williams, President and CEO of Detroiters Working for Environmental Justice. Please join me in welcoming Guy to the stage.

GUY WILLIAMS: Good afternoon, everyone. I'm not going to use PowerPoint, so I'm going to try to see how I can use my notes without screwing up PowerPoint for the rest.

I just want to say hi and welcome to Detroit to Director Bakkal and Chairman Quackenbush.

And I have to start out on a

down-to-earth note because of where we are. I understand that many of us are happy that these forums are going on around the State, and on the other hand, it would be really great if not only you were here, but if the Governor himself were here, because there's a lot going on here that he needs to hear right up front.

My organization, Detroiters Working for Environmental Justice, is a nonprofit organization, we're dedicated to improving the environmental and economic health of our community. We envision Detroit's resurgence as a vibrant urban center where all thrive in social, economic, and environmental health. To accomplish this, each day the DWEJ strives to build the meaningful connections, between jobs and a healthy environment, between community development and environmental justice, and between community-driven policy and economic development, that will transform our communities.

I also want to point out that we work often in coalitions, and so even though my organization was chosen to represent and carry the banner for environmentalists, there are many of our colleagues in the audience here from many organizations and coalitions, and we want you to know that in Detroit, people care about the impact of energy on our lifestyle. There's

major sources of the pollution not only in Detroit, but statewide, that impact our communities negatively, and I'll be speaking more about that.

I'm wearing a T-shirt from one of our coalitions; it wasn't exactly on a dare, but he thought, he's going to be wearing a tie, will he wear our Zero Waste Detroit T-shirt; I'm like damn right. And I will just digress for a second on why that's so important.

We have the world's largest municipal waste trash burner right down the street here. Somehow somebody thought it was a great idea to deem it a source of renewable energy, also known as clean energy. There are a lot of us who think that was a very bad mistake, we're working hard to correct it. So that's actually one of our things we want you to be aware of. You asked for background information. You should be aware that there are very strong and vibrant alternatives to burning all of our trash that would be much better for our economy and our environment. We'll be happy to give you those references on your website.

In 2012, Proposition 3 garnered a lot of grassroots support from across the State, and it reduced, the idea was to reduce our reliance on coal by pushing for more aggressive renewable energy targets, 25 percent by the year 2025. Everybody knows that that proposal was

not passed, but what many may not know is that in Detroit, that proposal did pass; 62 percent of voters were in favor of Proposition 3 in Detroit. This is a very strong statement in terms of our understanding of the impact of our energy policies as they are today. We need a change. Detroiters understand the importance of having a strong clean energy standard, because we experience the dangers of dirty energy production every day.

Our colleagues at Michigan NAACP put out a really great report. I'm going to give you a copy. In this report they are laying out a lot of research that shows that cross-pollination between the environmental impacts of the energy standards, which I'll come to in a few minutes.

And I have one other piece of background for you, and that is a very powerful document called the "Principles of Environmental Justice". Just to give you a little background, those principles were established in October of 1991 at an international convention of activists, and many of us in organizations across the country and across the world have been working to apply those principles, there are 17 of them, and a very strong preamble. And just a slight excerpt from that to give you some context.

In the preamble there's a statement about how Environmental Justice is there to promote economic alternatives that contribute to the development of economically and environmentally safe livelihoods. And I bring that up because I think there can be still a growing misconception that those of us who work for Environmental Justice are somehow in opposition to economic growth. It's further -- nothing could be further from the truth. We all want to make a good living, we want to make a clean living, and we believe in innovation and creative approaches, and so we applaud this forum and your statewide conversation, and we really hope that this doesn't just become another library entry later on, that this becomes an action platform that the Governor really gets behind.

I want to share with you just three of the principles.

Environmental Justice demands public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.

Environmental Justice demands the right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation.

Environmental Justice affirms the need

for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of all our communities, and providing fair access for all, and a full range of resources for all.

Detroiters working for Environmental Justice supports a clean energy policy, and we really support the process of reexamining these policies that we have on the books. Although we may not agree with all of the speakers that you hear today, what I think we all can agree on is the way we're doing energy policy now is not working for us. We've already seen a lot of data that speaks very clearly about that.

But some of the things from an environmental perspective I want to point out: First of all, we want to reduce our reliance on coal. I think everyone here probably already knows that the emissions from coal, there's no such thing as clean coal. Let's get that right off the top. No such thing as clean coal. You can start at the top of the mountains that they want to blast off to dig down and get the coal, there's nothing clean about that. There's nothing clean about bringing it here from out of state to burn it. There's nothing clean about working in the mines to extract it. There's nothing clean about people like myself who have

asthma needing to carry these around. It just doesn't cut it. We need to come up with something new, something better.

Changing our regulations will help significantly reduce our carbon footprint. We all know that that's a leading cause of global warming, or if you don't like that term, global climate change, how about that one. Anybody walk from your car to get in here today? Is this spring? I'll just let that speak.

A new energy policy will also increase employment opportunities, particularly among working-class and low-income people. We need jobs that are accessible to the whole range of our population here in Michigan; and the prospects of the types of jobs that go along with revamping and generating a clean energy policy match the profile of the education and experience and the training that's available to people. That's very important. People should know that even in the nascent state that it is, the clean energy industry is a $5 billion industry in Michigan today. Imagine what it could be if we really turned it loose. I mean think about it. Small businesses to large. Everybody has a stake in this.

I'm not going to go over everything I have here, but I want to point out that in Detroit our

unemployment rates tends to be twice or triple the State average in any given moment. This is another reason why I'm bringing this up about jobs. My organization has been working to train people in doing jobs and those career paths for the last five to six years, we're having a great success rate in bringing people to market, and they're finding jobs. We want to see that, those opportunities expanded and continuing to grow.

Let me switch over to the health in the interest of time. Did you know that more than 200,000 people live within three miles of a coal-fired power plant? Did you know that of those people, 31 percent are people of color? Did you know that people of color make up only about 18 percent of those with asthma; yet at the same time, 75 percent of hospital visits related to asthma? You might say, well, why is that? I have a couple of ideas: I think one of them is that many of those people are subjected to the pollution over and over and over, they can't get away from it, they have to keep going back.

What do we want? Well, we would like you to play as strong a role as you can in crafting a creative (inaudible) clean energy legislation that protects health while stimulating economic growth and providing economic opportunities for all Michigan

residents. This is a quality of life issue.

What else do we want? We would like you to adopt the Michigan Climate Change Action Plan that's been out there for several years, go back, take a look at those recommendations, and let's get busy. Right now we're working in Detroit on our own Climate Action Plan. It would be great if we could join forces and make those two plans go well.

And just to repeat, you know, I've got this button, "Imagine Clean Air". Our incinerator has got to go. I realize that it may not be part of your purview per se, but you need to understand that encouraging burning everything in sight is got a good, sound energy policy. We need a policy that encourages the reuse of the material in our waste stream, repurposing our waste stream from food stock to manufacturing, and again, these are jobs that match the populace that's looking for jobs. Very important.

Sorry, I just found that my time is up. I will conclude in just a moment here.

I'd like to throw out one final thought, and that is many of us have been working with the Department of Environmental Quality on how we can come up with innovative regulations, because the bottom line that we've already heard today is that the rules that govern

how we operate make all the difference in the outcomes that we get. We need change. We're working with that agency, but I want you to be aware and work diligently to dovetail your efforts with agencies such as the Department of Environmental Quality, because any major change in the energy policy is going to have a major change in the environmental impact one way or the other. So to have very front-ended and well-informed conversations between relative agencies would be very helpful.

Thank you very much.

STEVE BAKKAL: Thank you, Guy. Our next presenter is Mr. Wayne Kuipers representing Energy Choice Now, Executive Director. Please join me in welcoming Wayne.

Somebody from NextEnergy, can you come up? I don't know what the password is.

WAYNE KUIPERS: Good afternoon, Director Bakkal, Chairman Quackenbush. Thank you. Thank you for giving us an opportunity to present today to this group and to both of you. My name is Wayne Kuipers, I'm the Executive Director of an organization known as Energy Choice Now Michigan.

Energy Choice Now is a coalition of members supporting real energy choices. We're composed

of customers both large and small, industrial and commercial, suppliers, and trade associations. Our coalition was founded in late 2010, and since the time of our founding, we have attracted over 1,200 members, and that number continues to grow rapidly each month.

As Chairman Quackenbush mentioned in his introductory comments, the Governor laid out a fairly aggressive energy plan in his fall special message, and part of what he indicated a new energy policy needed to do was address some common pillars. Reliability and affordability are two of those pillars.

Of course, from a reliability standpoint, we believe that because Michigan is a member of the MISO grid -- MISO, that MISO's largely responsible for ensuring adequate and reliable capacity for the entire region. And, of course, if you look at the Governor's three pillars, we believe competition is clearly the path forward.

One of the things you will see as you look at this presentation and some of the others that have occurred today is that over the last 20 years, the only time Michigan rates were below the national average is from 2000 to 2008. Coincidently, at that time Michigan had full retail competition. Since the 2000 cap was put in place in Michigan, Michigan's rates have

skyrocketed, while wholesale prices across the country have largely declined, so clearly the trend in Michigan is moving in the wrong direction.

We believe competition also yields an environmentally sound policy. Increased plant efficiency results in decreased carbon emissions. And if you look at what's been occurring over the last three or four years, nearly 80 percent of the wind power is in regions with competitive electricity markets.

And, of course, adaptability. Free markets encourage generation where it's needed and when it's needed, and free markets allow the State and the users in the State to get power from the lowest cost, most reliability options.

In competitive markets, competition -- competitive generation gets built. In Michigan, what we've seen is competitive developers have built 4,000 megawatts of generation in Michigan; it's the only nonrenewable generation built in Michigan in the last 20 years. In the MISO market, more than 15,000 megawatts of merchant (non-utility) generation has been built since 2001. And in PJM, another transmission system, more than 26,000 megawatts of supply resources have been added in the last five years alone.

The MISO was created to ensure

reliability. It's largely in their mission statement. They're required to ensure enough capacity exists for all customers in the region, which includes Michigan, and they have rules in place to incent new generation is built when it's needed.

You've see this chart before today, and you've seen it in other hearings that you've had across the State, and I think the reason for that is because it gives you the most concise description, presentation, explanation for what's been occurring in Michigan since 1990, what happened in Michigan under competition, and what has been occurring in Michigan since competition was largely repealed.

Michigan once again has the highest rates in the midwest. You'll see the bar in the middle represents Michigan, rates in Michigan, the next closest competitor to us in terms of high energy prices is Wisconsin. Wisconsin rates should be the highest in the MISO region, largely because of the new capacity that they brought on line over the last three to five years, and yet Michigan's rates still outpace those of even Wisconsin.

This graph shows the all sector rate changes in both residential, commercial and industrial. Once again, since competition was largely repealed, the

Michigan rates have gone up 10.4 percent, much larger increases than any other states in the midwest.

And I will skip over this slide, but you're welcome to take a look at the presentation on the website.

Our current policy in Michigan clearly picks winners and losers. The quote that's on the screen right now is from Jonas McCluskey, President of Elm Plating Company. While he certainly applauds the legislature for giving their business tax relief, his comment is it pales in comparison to the money that they could save in a competitive energy sector here in Michigan. They're looking at annual savings of between $200,000 and $250,000 per year.

William Zehnder, the owner of Frankenmuth Bavarian Inn, also has a very telling quote. They unfortunately just missed out on getting under the cap in Michigan, while their largest competitor, the business right across the street, was able to get under the cap. Mr. McCluskey -- or Mr. Zender, excuse me, doesn't feel like Michigan government should be in the position of picking winners and losers. Our policy today currently picks winners and losers.

Competition works, and competition works for our utilities here in Michigan. This chart shows

where DTE, through their subsidiary, is competing in states that allow competition, and they have been for quite some time.

This next slide is a picture of a brochure that the DTE subsidiary is sending to gas stations in the State of Illinois. The tag line, "What could you do with an extra $300 a month in your pocket?" is one certainly that should be asked of businesses here in Michigan as well. If you look at the bottom, they have a special gas station rate of .0599, much lower than the rates that they offer their customers here in the State of Michigan. So you see, competition isn't necessarily a bad thing, certainly not a swear word, and our utilities, both of our utilities are actively and aggressively competing for business in other states that allow it.

Energy Choice is very popular among the voters of the State of Michigan. And again, I won't read the question, but you can do that for yourself. The point is 72 percent either strongly favor or somewhat favor the ability to shop and make decisions on their own about where to purchase their electric energy.

Competition shifts risks from ratepayers to shareholders. Mistakes get made, and these three headlines show the mistakes that have been made by our

utilities here in the State of Michigan. In a competitive market, the shareholders pay for the mistakes; in a closed market like Michigan is operating in right now, ratepayers pay for the mistakes that get made, and sometimes those mistakes result in billions of dollars of additional money being expended.

Long-range forecasts are often incorrect. A number of years ago, Chairman Peter Lark, who was then the chairman of the Public Service Commission, introduced his 21st Century Energy Plan. I recalled this rather clear in my mind; at the time, I was a member of the Senate Energy and Tech Committee, and I remember Mr. Lark coming to testify in front of the committee when he said we predict a 2.1-percent increase year-over-year for the next 20 years. What that would have amounted to was the additional need for 6,000 to 7,000 megawatts of energy to be built in the State of Michigan. At the time, I remember asking the question, well, why do you foresee a 2.1-percent increase in energy needs? At the time, many of our businesses were starting to contract, our unemployment rate was going up, and certainly energy demand from the business, industrial and manufacturing sector was going down. His response to my question was, we believe more people will be buying air conditioners. You need to buy a lots of air conditioners across the

State of Michigan to make up for a 2.1-percent increase year-over-year.

The point of this is forecasting is hard, and forecasting, when you're forecasting, you sometimes make mistakes; but when forecasts are wrong, the ratepayers are the ones that foot the bill, not the shareholders. In a competitive environment, the shareholders foot the bill for mistakes.

And I'll end with this quote from former DTE CEO Tony Earley. Competition is good for Michigan. "The restructuring law and major changes in the way we do business represent enormous challenges for Detroit Edison, but we embrace competition because it enables our business to grow and excel. Our goal is to be so good at what we do that customers will choose to stick with us."

That was a quote from the year 2000 in the Detroit Free Press, just as Michigan was entering and having competitive markets. Well, that same sentence holds true today. Competition does work and it will work for Michigan again. Thank you again.

STEVE BAKKAL: Thank you, Wayne.

Before I introduce our next presenter, I do want to recognize members of our legislature. We do have Representative Sarah Roberts here with us, as well as Senator Hopgood, minority vice chair of the Senate --

or House -- Senate Energy and Technology Committee. (Inaudible.) Would you like to say a few words, Senator Hopgood?

SENATOR HOON-YUNG HOPGOOD: Good afternoon. Thank you, it's a pleasure to be here. I know that we have a packed agenda, and I know that the Public Service Commission is trying to make sure it has a chance listen to everybody. And, you know, I was at the Lansing event, the kick-off event, and I think there's definitely more people at this one, although that was a packed house as well. So I want to thank all you for coming out and providing information, providing input from a wide variety of perspectives. I think this is an excellent process, and we're going to be peeking in to the Commission's process and really trying to get a feel for what they're looking at and what they're interested in, because I think that we make some good decisions out of what we do by coming together here.

One of the things that I remember being on the committee back in 2008 was there's a lot of discussion about the renewables' piece and how much this was going to cost ratepayers, and I think that's going to real -- been a really good experience. There were a lot of people that were saying that it was going to be too difficult, that it's going to be too costly, that we

wouldn't be able to get to a 10-percent rate, and if you look across the region, and across country, actually 10 percent is somewhat of a modest rate actually, and so I'm interested in the next discussion about how do we move forward. We've taken a lot of feedback, looked at the numbers, Commission's put out some really good reports in the last couple years talking about the costs and impact, and so I'm going to be in the next several weeks looking at putting together legislation as a starting point to raise the portfolio standard and to extend the program for a number of years. And so I just wanted to share that with all of you. We're going through this process, and it's a good process, and I heard a lot and learned a lot and ready to engage in the conversation about what's the next step forward.

And so it's really a pleasure to be here, and that's what I want to share with you today. Thank you.

STEVE BAKKAL: Thank you, Senator.

Our next presenter is Susan Sherer, CEO of the Heat and Warmth Fund. Please join me in welcoming her to the stage.

SUSAN SHERER: Thank you, Director Bakkal and Chairman Quackenbush and Jean, for having us all here today in Detroit at NextEnergy. I love your tag line

about ask us what's next, and I'm going to talk a little bit about what I think can be next for our low-income energy customers in Michigan.

As I said, my name is Susan Sherer, I'm with the Heat and Warmth Fund, and we're here today by invitation from the State of Michigan to offer some ideas to the challenges that face the low-income population with regard to energy affordability. We believe there is a tremendous opportunity to inspire accountability and energy efficiency among low-income customers statewide.

A little bit about THAW. We are a statewide organization, we've been in existence for 27 years, started by DTE Energy. We are the largest provider in energy assistance outside of the Department of Human Services; and since our inception, we've distributed over $110 million in energy assistance to more than 160,000 households.

So energy. Energy is an essential commodity, and we use it before we buy it. Not only that, we don't even really know how much we use before we buy it. We heat our home, we turn on our lights, we watch TV, we take hot showers, and the energy bill shows up a month later. Many people in our State can't afford the energy they consume, and in the current system, a low-income household can go into debt very, very quickly.

So reform is needed, and charity can not be the only option. We need to make changes that inspire and drive new behavior.

We believe that all households have the potential to use less energy, and that those in need will make a greater contribution if they have a better understanding of what energy costs, how much they use, and how they can use less of it. The current system does not inspire that potential.

In today's system, customers without resources are offered credits essentially and go quickly into debt. We want to build a system that moves upstream before they owe thousands of dollars. So what would that look like if we provided energy assistance in small amounts that's coupled with the customer payments closer to when the energy is used, all this while reducing energy costs in the home? So a bill for Mary and Michelle, instead of allowing them to get into a situation where they're $2,000 in debt, and it's overwhelming for someone without resources, how do we get upstream on that and start at the very beginning with that customer and work with them?

So what does a winning situation look like in Michigan? I'm going to give you an illustration, and I'm going to ask that you suspend for a moment this

idea that energy costs will go up. So just ask you to suspend that for a moment, I'm going to assume that the really smart, talented, brilliant people in the State of Michigan are going to find a way to lower energy in the next five years. But this is an illustration that really doesn't take into account that energy costs also rise. So right now it's about $2,500 a household. You can see that the green area there is the customer payment, and the blue area is the federal LIHEAP, and the unmet need right here of about $1,000 is what currently the State or other foundations, donations, corporations, help meet that gap.

So in two to three years, if we were just able to reduce the energy in that home by 10 percent, and some of these homes, that would not be a hard thing to do, and if the customer also contributed about $10 more a month, we could really impact this overall load right here. Let's say in three to five years we were able to do that by five percent more and then just another $100 from the customer, so over time about $18, $20 more a month over that five-year time period and just a small reduction.

So again, THAW wants to be about reducing energy. We believe that working in partnership with organizations, changing the behavior in the household

through consumption or through the structure, decreasing energy utilization on the top, and then on the bottom, stimulating payment performance, again in small amounts, meeting the customer where they are, this increased alignment can potentially drive 58-percent reduction in this unmet need that is here.

So how are we doing that now? Our current -- let's see, let me get back to the right slide. To achieve this, we have several public/private partnerships at THAW, and we have a team of experts working on the next generation interventions that will complement the utilities' solutions while working with the particular needs of the low-income customer with the goal of self-sufficiency.

Our ongoing partnership with DTE was a launching pad for our mobile processing, so taking the help to the neighborhoods, in the church basements and in the community centers. The DTE Neighborhood Energy Center and the more recent Care Management Pilot are great examples of partnering to understand the pain points and the potential, the potential of our low-income customers. These small collaborative pilots informed what is now a full-scale program called LSP, Low-Income Self-Sufficiency Pilot Program -- I can't say that fast -- but LSP, and that offers affordable rates.

A year ago THAW entered into partnerships with Consumers Energy, the Department of Human Services, and CLEAResults, and we hired a global product design firm to perform a behavioral study of low-income customers in Flint, and from that study we identified a set of guiding principles that have informed all of our work, all of our pilots, and will inform our work moving forward.

So these guiding principles, pretty simple: Meeting a customer where they are. Giving them control. We need to give them control in charge of their destiny. We need to enable quick wins, it can't be a complicated process.

Our Clear Control Pilot is just an example to give you some ideas of where we're headed, and we hope that policy and reform will support this. Clear Control will test a completely redesigned billing and payment system that addresses the unique needs of low-income customers. It will feature frequent billing, pay-as-you-go, daily consumption will be communicated via text message, e-mails, telephone calls, telling that customer, this is the number of days that you have energy left. It will also give access to preapproved aid. So subsequent iterations of the Clear Control will employ technologies such as prepaid kiosks, a phone app, this

will allow THAW and our utility partners to scale this initiative to thousands of low-income customers in need.

Reform as we define it enables agencies like THAW to move from being a charitable giving organization to a practical social innovator, developing and providing realtime solutions to Michigan's utilities, while equipping low-income customers to pay for the energy they used. We believe that social innovation and entrepreneurship is the key to reforming Michigan's social innovation, the key to social services system.

This is evidenced by our recent cosponsorship with Consumers Energy of MEDC's Pure Michigan Social Entrepreneurship Competition. If we have any social entrepreneurs in the room, be sure to sign up this for this, it's a prize competition called Fostering Energy Affordability. There's copies of the press release describing this opportunity found on the table outside.

So in conclusion, as new policy is developed, we ask stakeholders to consider the challenges and special needs these customers face regarding energy affordability. We can not continue to offer a one-size-fits-all, and we are requesting that the Commission, legislators and other stakeholders offer flexible plans that serve the low-income customer. We

believe that there's potential to reach them before they enter crisis, to inspire accountability, and to serve more people without incurring greater cost to the taxpayers in Michigan. Thank you very much.

STEVE BAKKAL: Thank you, Susan. Our next presenter is Nick Khouri, Vice President of Regulatory Affairs from DTE Energy. Please join me in welcoming Nick to the stage.

NICK KHOURI: Good afternoon. As you heard, my name is Nick Khouri, I head up the Regulatory Group at DTE Energy. It's a pleasure to be here today, and it's an honor to be on this panel with the other panel members.

As you will hear, we sometimes, sometimes frequently disagree on issues, but it has nothing to do with the respect we hold for either the individuals or the organizations, and we welcome and encourage the continued debate about the appropriate solutions and alternatives for energy policy in Michigan.

Before I respond to a few of the specific questions that were asked, let me say a few words about DTE Energy. At DTE Energy, nothing is more important than providing secure, reliable and affordable electricity and natural gas to over 5 million Michigan citizens. We have been meeting Michigan's electricity

and gas needs for over 150 years. And that's important, it's important to us, it should be important to you, because our investments, our planning and proposed policy changes need to recognize the impact, not just today, but on future generations.

We are, as you know, Michigan-owned, Michigan-operated, and we take our responsibility to the State seriously. For example, we were one of the first companies to participate in the Pure Michigan Business Connection Initiative in an effort to purchase more of the goods and services from Michigan-based suppliers. Last year DTE Energy spent over 800 million with Michigan-based suppliers, nearly double what we spent in 2010. Here in Detroit, spending with companies in the city rose to over $100 million from about $80 million in 2010. In terms of statewide employment, the electric industry as a whole is responsible for 25,000 good-paying jobs. When you add the indirect jobs, that number more than doubles to 60,000.

And our commitment to the communities we serve is also reflected in efforts to make sure the neediest families have access to the support they need to pay their utility bills. That's why in response to the recession, we ramped up our efforts to identify and reach out to Michigan families in need. Through these efforts,

we are now connecting 50,000 customers per year with more than $100 million of energy assistance.

We've been working diligently, as many groups have, to respond to the more than 100 plus questions that were asked of us a few months ago. In my limited time today, I want to focus on just three key sets of data and analyses that will support future energy decisions, decisions that will deliver what Michigan families and businesses expect; the most reliable electricity at the most affordable price. We think the data and analyses demonstrate these three things:

First, electric deregulation in other states hasn't delivered on the promise of lower rates.

No. 2, second, the experience in other states shows that a reliable source of electricity is best assured by a system of responsible regulation.

And third, Michigan's 10-percent deregulation cap has led to savings for a small group of customers, but has raised rates for 99 percent of Michigan families and businesses.

Before I address these questions directly, let me just say a few words about electric rates in Michigan. As I said, a key goal of state policy is to make sure access to electricity and natural gas is affordable for Michigan families. It's true that

residential electric rates in Michigan are about 10 to 15 percent above the national average. Business rates, by the way, are about 5 to 10 percent above the national average. However, to really understand affordability, we need to look at utility bills, not just rates. What's important for Michigan families is the dollars going out the door each day and each month to pay your electric bills, not the mathematical formula of cents per kilowatt hours.

And as you can see on this slide, the average electricity bills for Michigan are actually 20 percent below the national average. In fact, this relationship between average use and rates explains a large part of the differences across states. In this chart, we show the relationship between average use and rates for all 50 states. There's a very tight relationship. For example, Louisiana uses 73 percent more electricity than Michigan, and has some of the lowest rates in the nation. On the other end of the spectrum, can you see that Vermont uses on average 30 percent less electricity and has some of the highest electric rates. It's also true that this relationship hold for the midwest. You can see Ohio and Indiana use on average 30 to 50 percent less electricity than we do in Michigan.

Now, it makes sense, this relationship between rates and bills. So much of the cost of the electricity system are fixed by the operating requirements of the system. For example, we need to construct and maintain the poles and wires that lead to your house whether you use twice as much electricity as your neighbor or half as much. This reality of low-average use in Michigan, in addition to other states having access to cheaper coal and hydro power, explains nearly all the difference in relative rates.

But now, of course, our goal is to deliver the most reliable service at the lowest possible cost to every family and business we serve. One way is by improving efficiency in everything we do. We're proud to report that we are controlling our operating costs, shown here on the next slide, better than any other large utility in the nation. Over the last five years, this is from 2007 to last year, we're the only major utility in the country that has lowered our operating costs. We did this so we can pass these savings on to customers. In that spirit, we're committed to not increasing DTE's electricity rates through 2015, even though we haven't raised rates since 2011, and we're in the middle of a very large high-investment period.

But let me get back to the data and the

analysis that I mentioned earlier. For most of our industry's 150-year history, states have maintained an approach of fully regulating electricity generation under a system of uniform governmental oversight and accountability. This has allowed utilities to focus on a long-term approach to building electric infrastructure and delivering the electricity that families and businesses rely on, and to grow at a pace our economy demands.

Now, during recent years, a few states have tried the path of deregulation for the generation of electricity. Proponents of deregulation have argued that it would lower rates for all customers, both now and in the future. But there are two problems with this argument: First, it's not true. Prices in deregulated states are higher than in regulated states, as you see on this chart, about 30-percent higher, and have increased about the same pace as regulated states during the last decade. What you can see over the last decade again, as shown in this slide, rate increases in regulated states and deregulated states have grown about same, so it's not true, at least we haven't seen in the last decade that deregulation either lowers rates for all customers or lowers the absolute rates or slows the increase. So the argument just doesn't hold water.

The second problem with deregulation, I believe, I believe deregulation puts at risk the core responsibility of what we do, which is assuring Michigan families and businesses electricity will be there when we need it, both today and into the future.

Just let me say a few words about this relationship. Most of you already know about the relationship between deregulation and reliability. Providing affordable, reliable electricity to thousands of communities and millions of families in Michigan, it's complicated business, as you know. It's important to understand what makes electricity different from other industries.

First, electricity is so important to our economy and way of life that the industry traditionally has built and managed electric generating capacity so that it can meet peak demand under even the most extreme circumstances.

And second, unlike other products, you can't store electricity, so electricity production, transmission and distribution all happens virtually simultaneously. This makes the electricity industry different than any other industry.

At DTE, for example, for a few hours on a hot August afternoon, we need to meet the demand for

electricity that is nearly three times greater than the low point of the year. In addition to being able to respond to unforeseen events, it's our responsibility to have another 10 to 20 percent of generation capacity just be available just to be called upon even though it's rarely used.

In a deregulated market, the market will not build the right generation at the right time to supply power that is used only a few hours a year, if at all. It's building these power plants that makes the reliability of the U.S. electric system the envy of the world and powers Michigan's economic prosperity. It's our responsibility to make sure that when families and businesses we serve need the electricity they rely upon, it's there. We take this fundamental responsibility seriously. We build all our policy positions around it. And it's the regulatory structure that allows us to make investments year-in and year-out to maintain our diverse portfolio of generation assets.

A current example of the problems of reliability and deregulation is in Texas. Both regulators and policymakers are concerned about meeting Texas's electricity demand during the hot summer months. Since deregulation, which you see here, was started in 2002 in Texas, Texas generation has fallen from

significantly above the minimum level needed to ensure reliability to, as you can see, dangerously below. Now, as a result, policymakers in Texas are scrambling to avoid the potential for blackouts and brownouts.

Other states have faced the same challenges. Seven other states, Arkansas, California, Nevada, New Mexico, Arizona, Montana, Virginia, thought deregulation was the answer. But all those states now have reversed and are moving back to responsible regulation, because they have seen the negative consequences first-hand. That is why we believe responsible regulation has worked for the last 150 years and is still the model for 35 states.

Now, let me move to Michigan for just a few more minutes, which we adopted a deregulation cap in 2008. DTE continues to support that workable but imperfect compromise that limited negative impacts of deregulation in Michigan. But the result of Michigan's deregulation can be shown in the next chart. The overwhelming majority of citizens pay higher prices so that a small minority can benefit; that's because those who remain in the regulated market pay the basic costs that are required to keep the system running and reliable. Increasing the deregulation cap would only shift more of the cost from the many to the few.

Michigan families and businesses deserve fairness for every customer, not just a select few.

Let me conclude by just describing our vision for Michigan's future. To us, our vision is all about what Michigan families and businesses deserve. They deserve a Michigan where electricity service is even more reliable, affordable and efficient than it is today. We all want a better Michigan for our future and the future of our children and grandchildren. We all know our State deserves better, and at DTE we have a responsibility to do our part to make Michigan better than ever, and we take it seriously. They deserve a Michigan that is energy independent and secure, they deserve a Michigan that's cleaner, a healthier Michigan whose electricity is generated as efficiently and as responsibly as possible at facilities located within our border, operated and maintained by Michiganians.

We are committed to working with the Commission, the administration, interested parties and the legislature to develop, adopt and implement policies to turn this vision of Michigan's energy future into a reality. Thank you.

STEVE BAKKAL: Thank you, Nick.

Our next presenter is George Andraos, Director of Energy for Ford Motor Company. Please join

me in welcoming George to the stage.

GEORGE ANDRAOS: Good afternoon. Director Bakkal, Chairman Quackenbush, thanks very much for giving me this opportunity to represent Ford Motor Company in this forum.

I would like to start my presentation in reading the sustainability vision that our chairman, Executive Chairman Bill Ford set for us. Our vision for the 21st century is to provide sustainable transportation that is affordable in every sense of the word, and that is environmentally, socially and economically viable. And we look at this not just as a requirement, but a tremendous business opportunity for Ford Motor Company.

In this next slide, I bring it all together for us, environment, economic and social, and sustainability is in the heart of it, and that really leads to processing in our vehicle and also our manufacturing and dealerships.

I'm going to talk just a little bit about Ford Motor Company, and then I will go into where our energy use is mostly in the manufacturing facilities.

This is our Ford's Power of Choice Line-up and our efficiency, from ecoboost, hybrid and plug-in hybrid and electric. And I want to touch a little bit of my presentation today talking about the

impact of the electric and the plug-in hybrid on the future of energy.

This is our offering today, and it, I'm proud to say that three of the vehicles are produced here in Wayne, Michigan, and this is a very important part of our business today.

The reason for the importance of the vehicle into the future of energy, as you can see, this chart represents the increase in the use of the electric transmission, which is electric vehicles and plug-in hybrid. It took almost eight years to get to the, around the 2 percent, and in the last two years it went up to the next percent, so there is -- we see tremendous (inaudible) in that area, and we need to make sure that's not ignored as we plan the future of our energy.

And just kind of a few words about Ford's presence here in the State of Michigan. We have over 40,000 employees, almost every product we made has some kind of roots or relationship to Michigan. We have 13 major manufacturing facilities; this is the home of our product development, research and engineering centers and testing facilities; and 2012, we purchased over 15 billion in goods and services in Michigan-based suppliers. So Michigan is very important for us.

This is just a quick slide to see kind of

how the distribution of our suppliers in the State of Michigan.

Next I want to talk a little bit about what Ford has done in efficiency. We're a strong believer that energy efficiency is very important, fundamental aspect of the future of energy. We made a commitment, we made it publicly last year to improve our energy efficiency for vehicle production by 25 percent in 5 years, that's between 2011 and 2016. Each facility globally requires they have a road map, that's including the 15 manufacturers' facilities we have in Michigan and our resource and engineering center, and we developed an operating system to drive that behavior in our company. We've developed an operating system that looks at process, design and culture. We look how to redesign our facilities to be efficient, to put the (inaudible) efficient processes inside, and also change the culture.

My apologies here for pushing the wrong button. So when we look at what Ford has done, we started in 2008, this is our kilowatt hours per vehicle globally. Between then and 2011, we improved our efficiency by 22 percent, and we're looking to add another 25 percent.

(Inaudible) and bring it here home in the State of Michigan. We look at last year, we improved our

efficiency per vehicle by 7.6 percent, and if you take a look at what that represents between electricity and natural gas, 224,000 megawatt hours, and that's equivalent to about 20 wind turbines.

And I take it a step closer to one of our manufacturing facilities that actually produce electric vehicle. Between 2000 and 2010, we improved efficiency by 36 percent, and that's comparing 2008 and '12 are sort -- 2000 to 2012 are the years where we have some of the production volume. This is not playing on the number, this is really an effort what we've done in lighting upgrade, HVAC, the process upgrade, and they can see our process.

We've been very active in renewables across the globe, and wind turbines and hydro and also combined-cycle and geothermal and solar. We supported the Michigan RPS in 2008, and we need to be part of comprehensive energy solution, we need to make sure we're making the right decisions for the State and to create a sustainable and socially and economically viable solution.

And here I would like to talk a little bit about the cost of energy and what it means to Ford Motor Company. If we look at this chart here, this takes our costs in the states, this is where we have in

manufacturing facility here in the midwest. Our costs of energy in the State of Michigan is, this is kind of significantly higher, as you can see, from the other states, and I'm showing here the states where we have Choice and also the states that regulate. This is a big concern for us, as it is to many of the industries in the State of Michigan. Higher costs drives businesses away from Michigan. For Ford Motor Company, truly when we do a program, a program could potentially be in our plants in Livonia Transmission Plant or it could be transmission plant in different states. Same thing in engine plant, could be an engine program in Romeo or it could be in Lima, Ohio. And there are very few variables that impact the cost of a new program, because it's going to be very much from labor perspective and investment is the same, the two key variables are energy and transportation, and we are concerned that high cost will drive business away from Michigan.

We are in the State of Michigan the largest customer for DTE, over 100 million, and you could do the math. When you have a significant increase, 20 percent in energy cost over other states, it's a serious concern for Ford Motor Company.

And here in summary at the end of my presentation is we need to make sure that the new

vehicles are growing part of utility business. We need to take a very hard look. I believe other states have been more progressive in looking at that. It's not an issue today, but in a few years, the increase in the plug-in hybrids and electric vehicles is going to play a key role, and it could be a detriment for the system or a it could be a cost in the future. Cost is a big issue for us.

And renewable is important, we support renewable, we really need to make sure at same time it's not driving the cost up. We need to do a smart renewable policy. Energy costs impacted many areas, it impacts our bottom line, it impacts us to all the suppliers, and also drives business away from Michigan. If I don't leave you with any important statement here, is business will go away from Michigan in our situation with higher energy costs.

We're committing to work with the State here on future of energy and we appreciate this opportunity. Thank you.

STEVE BAKKAL: Thank you, George.

Our next presenter is Stacy Paradis, Deputy Director of the Midwest Energy Efficiency Alliance. Please join me in welcoming Stacy to the stage.

STACY PARADIS: Thank you, Chairman Quackenbush and Director Bakkal, for having me today. Again, my name is Stacy Paradis, I'm Deputy Director of the Midwest Energy Efficiency Alliance based in Chicago.

Just to give you guys a little sense of who we are, we are in 13 states in the midwest, we have about 150 organizational members. There is a whole gamut of us involved in energy efficiency; so utilities, state and local governments, as well as manufacturers, retailers, commercial and consumer advocates, as well as academic and research corporations and energy service companies and contractors. We've been around since 2000.

Our real focus is on two things regarding energy efficiency. We are recognizing that it supports sustainable economic development, and that's tied to cost-effective efficiency programs, as well as building energy codes. Those are things that we support on the policy side. Our goal is really to find a common ground for all the folks that are involved in energy efficiency, because our goal is to save energy. That's what we're all looking for.

So just to give you a sense of where Michigan is, you see before you a list of our members in Michigan; again, they're kind of a diverse network. But some of the things we've been involved in here, we have

been working on building energy codes, we have held energy expos at the capitol highlighting all of these Michigan-based businesses that are involved in energy efficiency and all those jobs, as well as a lot of the industries that are based here, which I'll talk about a little bit later.

Another thing we were looking forward to that's a growing opportunity in Michigan is related to solid-state lighting. We had the opportunity to work with the State Energy Office last year, and we're looking to do that this fall with the Commission this year, so it's an opportunity we look forward to to growing a new industry in Michigan.

What is energy efficiency? There's a lot things on this chart, so I apologize for that. But the reality is this: Energy efficiency is really allowing people to -- it doesn't mean forcing you to stop doing something, it just says a technology-driven process allows you to do more with less energy. That could mean changing your lighting in your home or your business, it could also mean insulating your building so you have less wasted heat. It's an essential role in the supply/demand curve, what we're talking about related to energy. You've seen a lot of that talked about today.

But what it comes down to is the cost of

energy. You can see from the slide right up here, average cost to generate electricity is just under, in 2010, it was just under 10 -- I'm sorry -- 10 cents per kilowatt hour. Energy efficiency is only at 2 1/2 cents, and I think Director Bakkal mentioned this earlier, three times less, so it's much better to focus on energy efficiency, save that energy, as opposed to generating new. That helps our businesses, that helps our consumers.

Just a couple things to reassert what 295 has done, and that was the energy efficiency portfolio standard that was put in place in 2008. The focus here was for your investor-owned utilities and your publicly owned municipal and your cooperatives to save, on the electric side, 1 percent a year, and .75 percent on the gas side annually. That is something that they were supposed to hit by 2012. All of those utilities have met those requirements, and I'll show that to you shortly.

But I think one thing that's really important to mention, we talked about it a little bit today, and Governor Snyder has been really important in recognizing this, but he had a great quote, which is: Energy efficiency is the best example of a no-regrets policy that Michigan can have. It does really focus on his key goals of more reliable, more affordable, and

protecting our environment.

I was asked to you give you a synopsis of how Michigan compared to other states. So you'll see before you, these are by state of what the mandated requirements are of renewable energy efficiency, and also on the investment. So you see there's been a huge growth in energy efficiency in the midwest in the last six years. In particular, you'll notice, though, it's grown from, it's almost a $1.7 billion industry based on standards that are in place by 2015. So in Michigan, that investment in energy efficiency is going to grow to $270 million by 2015.

But let's talk about what that means. What does that mean related to jobs, which is what everyone is concerned about here, especially in Michigan? Now, these are 2010 numbers, and they were still ramping up in the energy efficiency investment here, so these numbers are only going to get bigger. And you'll notice in the pie chart the diversity of sectors that those are involved in. So these are jobs that are available to a lot of people throughout the spectrum; we're talking about contractors, we're talking about folks that are working on assembly lines, we're talking about folks that are also doing energy audits and things like that, so again, it's the full spectrum. You'll see how it

compares again to states around the midwest.

And then Director Bakkal -- or I'm sorry -- Chairman Quackenbush mentioned this report that was released by the Commission in 2010. It really just tracks the amount of jobs. So in this previous slide -- which I did not highlight, I apologize -- Michigan jobs were a little over 11,000. If you talk about how those are going to be over the lifetime, we have an increase of 13,000 jobs over a 20-year lifetime. And look at the impact that's going to have on gross state product. That's going to be nearly $1 billion over the 20-year period, so that's an incredible investment in the State of Michigan.

This (inaudible) here just shows you what the utilities in the State have done related to the mandate that was put in place; essentially all those targets have been met. This is the most important fact, though, I think: When you talk about the investments that have been put forth, for every dollar that's been invested, $3.55 has been returned to the local economy. So what that means is for consumers and for businesses, that's more money in their pockets, that's money they can invest in their families and their communities and in their business, themselves, it's also something that makes those businesses more competitive.

Again, to show you the comparison of how those savings and how that investment ties to the rest of the midwest, you can see again, these are 2010 numbers, for some of them we got the 2011, Michigan is doing very well when you consider the standard had not yet matured at that point.

But what does all this mean to what the gentleman from Ford was just talking about? How does this influence the industrial sector? So your industrial sector in Michigan is 26 percent of your energy usage, but that ranks 11th in the United States. What can energy efficiency do for those businesses? And this is the sector that is facing mounting, mounting pressures that we just heard. Energy efficiency is essential; it helps them maintain competitiveness, it helps them maintain a skilled workforce, increased productivity, and assures that those manufacturers remain in the State. I think the gentleman from Ford was very clear in putting that forth.

But you'll see here some examples of companies based in Michigan and what they've already committed to on energy efficiency and how they have talked about the beneficial investment. Aside from Ford, you have GM that's done some Energy Star investments in some of their plants; Guardian Industries, which does

windows and glass manufacturing, have been very involved; Dow Building Solutions, which I think you guys heard from a few weeks ago, they have a substantial interest in insulation and a lot of home building supplies; and then you have Whirlpool, which is obviously a national -- international leader when it comes to energy efficiency in their appliances.

So what does all this mean? Again, when we want to talk about what this investment means and speculating on what new industries can come, energy efficiency is already generating jobs in Michigan, so it's something we need to continue going forward. 2,500 plus trade allies, and just in those first three years, over $660 million in investment statewide. And that's just the beginning of what the benefits of energy efficiency are going to bring to the State.

So I think it's essential as we talk about what to do and what kind of report the Commission is going to give to the legislature next year, what kind of investment should be continued in energy efficiency to help the overall economy obviously, but increase jobs and save Michiganders money.

A couple of things to highlight what Michigan's done very successfully compared to other states in the midwest. They put together a deemed

savings database, that's something that's been done through the Commission, that's had a great benefit, including efficiency on the back end of the process; you have cost recovery for the utilities, you have performance incentives, we've heard a little bit before about low-income programs, as well as the nationally recognized Michigan Saves.

A couple things to think about, and this is my final thoughts: Building energy codes. Again, as I mentioned, you have a lot of industries here in Michigan that are producers of these; these not only create jobs here in Michigan, that's also going to save businesses and consumers money in the long term. Energy efficiency is something that it is a great service to those consumers, again giving them more money in their pockets. There's an opportunity for our government to save money, and that's true in both the lead by example in public building and benchmarking commercial building, as well as just saving things for our environment.

Thank you.

STEVE BAKKAL: Thank you, Stacy.

That concludes our formal presentations at this point. I think it's a good time to take a break. Let's reconvene at quarter after 3:00. There's some refreshments out in the lobby, then we'll come back and

we'll start our public forum. Thank you.

(At 3:03 p.m., there was a 20-minute recess.)

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STEVE BAKKAL: O.K. I think we're ready to start. We have close to 80 requests to speak, and like I mentioned earlier, we are scheduled to end here at 5:00, but from talking to the staff here at NextEnergy, we can stay here until 6:00 o'clock, so just accommodate as many requests as possible. Based on historical forums that we've gone through, we've been able to get through at least 30, close to 40 sometimes when we stay until 6:00, but that does mean that we have to limit each speaker to three minutes and three minutes only.

We have someone here in the front that will be signaling the speaker when their time is getting ready, when they have a minute left and when time is concluded. There are a lot of people that are here that drove distances to come here, so please adhere to that time and respect people's desire to speak here. And just to move things along quicker, what I'm going to be doing is calling four speakers at a time, and if those four speakers could come up and take a seat behind me, and they can just each start coming up as they're called, and the next one can come on up on their own.

I'll state the names the first time.

When you come up, please just state your name, where you're from, and any affiliation that you have. Some of the speakers that requested to speak did have some presentations that are loaded here, so feel free to show us those when they come up.

So with that, let's introduce our first four speakers. Again, just come to the front here. Clayton Donnell, Jennifer Battle, Paul Beck, and Reese Serra, if you can all come up at this point, and Clayton can come up right to the stage. Thank you.

CLAYTON DONNELL: Good afternoon. Welcome back from the break. Thank you for the opportunity to speak.

I'd just like to take a moment. The State is asking us to come up with reports that tell us what needs to happen for energy policy in Michigan. Many reports have been done; one that I like to allude to is the American Council for an Energy-Efficient Economy. They do a state scorecard. Michigan ranked 12th in the United States in the scorecard. And the gist of the matter is that none the states, Massachusetts being number one, has a complete handle on everything. We can all learn from the other states.

That being said, you can look at the ACEEE score card on your own, but I would like to go

beyond that and challenge the legislators and policymakers that it's not just about data, because if we institute a program, it will be carried out for those people who know about it. A good energy policy program has to be woven into the fabric of every Michigander's life. It starts at the inception when we work on our fundamental things that we do every day.

I own an insulation company. We do energy efficiency retrofits. We're where the rubber meets the road every day. There are children running around in the street that have no idea what energy efficiency is all about. As a state, include those children into that comprehensive program. Let's have a state-funded science fair that talks about energy efficiency. Let's have fundraising events through energy efficiency measures. Yes, it can be done.

Let's start with the brand new houses that are being built and give them an energy rating score, if you will, so that we can compare them to the rest of the houses that are already existing in the market, and we have no idea how they're going to compare. It might look something like this. The ASHRAE Standard 62.2P says we should have eight fresh air exchanges in every house per day. Let's just say the perfect house is an 8, and if we go out and do a blower door on another

house and that's a 10, it's close, but not quite good enough; and when we look at another house that's at a 12, it's not as good as the 10. It's a pretty common or pretty easy concept to understand. I'd like to see that instituted in the State, that every structure in the State of Michigan has that kind of a rating. We start with those that are changing hands; so if a house is being bought or sold, we do an energy audit and we record it, and we compare it to those others going down the line.

I'd also like to recommend that as we weave this into the fabric of life, that the State of Michigan leads by example, retrofitting the government buildings; that the marketing program through Pure Michigan dovetails into energy efficiency. So I challenge the legislators and policymakers that, you know, it's not just about data, but it's making sure that every Michigander understands what we're doing to make Michigan a better place. Thank you.

JENNIFER BATTLE: Thank you. My name is Jennifer Battle, I'm the director for sustainability at Michigan State University. Thank you for allowing me to speak today.

Michigan State University, as you know, is a large public research institution. We have just shy

of 49,000 students, 11,000 faculty and staff, we have a large 5,200-acre campus with 500 plus buildings, 27 miles of roads, and we even have our own power plant that supplies steam and electricity for most of the campus. So in essence, we are a small city, much like the other communities in Michigan. And like the other cities and communities in Michigan, we also have the issue of the challenge of energy and thinking about that for the long term for our organization.

Our president also often says that sustainability is part of our DNA as a land grant institution, so we believe that we're responsible for providing economic, environmental and community value for solving the world's most pressing problems, and energy and climate change are among the biggest challenges for this and future generations. So we had to respond to that, and we created our own energy plan for the campus, and we set out a bold vision for our campus about being powered by sustainable resources, by being powered to renewable energy -- by renewable energy.

And the three goals the plan first include improving the physical environment, so first looking at lots of opportunities for conservation and efficiency and fuel switching, because we believe the most sustainable piece of energy is the one you don't

need at all. So conversation is job one.

The second is investing in sustainable energy research and development. Being a large land grant research institution, we have a lot of resources available, we have a lot of faculty who are doing work in these areas and partnering with other companies, and it's important for us to be developing the technologies that we think will fuel -- no pun intended -- but will fuel our transition.

And finally, to be a leader, an educational leader in this area. We have -- again, it's not only important for us to do these things on our campus, but it's important for us to share them, to share solutions for the State to benefit both not only us, but other communities around the State of Michigan.

So with our energy plan, first we are bold. We want to be bold. We have to paint a big picture, a big vision for our campus.

Second, we were balanced. So we didn't just look at one factor such as cost or reliability, we had to look at them all so that we came up with a set of balanced strategies to move us forward. We looked at cost, capacity, reliability, environment and health factors.

And finally, the plan is collaborative,

not only in the creation of the plan and doing things similar to what's happening here by having town hall meetings and soliciting lot of opinions, but it's collaborative in the implementation of the plan. So we're leveraging our research and our operations on campus and partnerships to test out the new technologies that we want to implement, but also we believe that that strengthens the economy. We work with a lot of Michigan business, these are new sectors for them, it's providing jobs, and we believe we're strengthening the economy that way.

So when we're, you're looking for advice about how to move forward with Michigan's energy future, first, this is an opportunity for this State. We need to look at this as an opportunity and move forward and take advantage of this opportunity. In order to do that, we have to be bold. We can't just look at small, little we can do this program here or this program there, let's set a big, bold vision for State, and then let it measured and balanced so that we can achieve the goals and achieve the vision.

And finally, promoting renewable energy research and development; that's going to be important, I think, renewable energy research and the technologies are, will be one of the things that drives Michigan

forward.

So Michigan State University, we have students, faculty, and staff who are leaders, lifesavers and world changers. And thank you for the opportunity for us to speak today.

REESE SERRA: Good afternoon. My name is Reese Serra, and I'm here on behalf of 123.Net. I'd like to thank the Michigan Public Service Commission and the Snyder administration for taking up this important issue. Particularly, I'd like to commend the Snyder administration for its efforts in reducing costs and creating a better work environment for the State of Michigan.

123.Net is a Southfield-based internet, telephone and data center provider that's been in business since 1996. They have offices in Southfield and Grand Rapids, and unmanned facilities in roughly 50 locations throughout the Upper and Lower Peninsula. 123.Net has a fiberoptic network of roughly 1,600 miles, and provides services to roughly 30,000 customers throughout Michigan, including over 5,000 Michigan businesses. Notable customers include major Michigan municipalities, both county and local governments, major public and private Michigan universities and colleges, many elementary, junior high and high schools,

significant hospital systems, other Michigan internet, phone and data center providers, professional sports franchises, including three out of four in metro Detroit, one of the largest social media companies in the world, many of you probably have this app on your phone, but it's one of the greatest means of communication, and many major manufacturing and high-tech facilities throughout Michigan.

So why are low energy rates important for 123? 123 currently has a focus on providing internet and telephone connections to businesses and residents like I just mentioned. We're currently in a transition to expand our data center business, and at the moment we spend $200,000 per month on electricity; we expect that to grow by roughly four to five times over the next five years. We're also in contention right now for the State of Michigan primary data facility, data center facility in Southfield, and I think we're within a handful of other providers that can really save the State a lot of money and hopefully foster growth here in the metro Detroit area.

If electricity rates are not lowered, future growth in Michigan's telecommunications industry will not come to the State, it will go to other markets like California, Chicago, New York, Miami, Houston and

Virginia. Additionally, existing Michigan data center providers will be forced to expand out of state where power rates are much more affordable.

Currently, as you can see with this chart here, 123 has a complex with two buildings; one of them is on Choice and pays roughly 5 1/2 cents, the other is on DTE at the best available rate, which is the D6 rate, and it pays almost 10 cents. The rate has actually gone up a little bit because our usage has changed a little. So that's not right. It's not competitive.

Currently, Michigan has competitive commercial real estate options for data center providers and affordable rates in place for telephone and bandwidth options, but the element that's most needed, power, is not competitive. If competition is not introduced, 123.Net will be forced to seek other states for its future growth.

And this, the interesting part is that this dialogue that we're having now is not unique. In the telecommunications industry, roughly 20 years ago, this same dialogue was occurring then, and AT&T gave a very similar presentation like DTE did today, and they said that less competition is needed, more competition will only hurt the market, and it will transition costs to the consumer. Well, that wasn't the case. The

Michigan Public Service Commission, in a great decision, decided to open up the market and allow other companies like 123.Net, which is a competitive local exchange carrier, to compete. The result is we have lower costs for telecommunications services, we have a better product, and more Michigan businesses are hiring because of the growth that they've received.

So what we need now is we need to open up the market to competition so that we can have lower costs, a better quality product, and Michigan businesses can pass that cost on to increased job growth and investment in their companies. As an alternative -- and this is something I was thinking about just sitting here, I hadn't prepared it -- but in some of the other energy markets, we're able to take advantage of an index price option; we don't have that currently with DTE or Consumers -- we have a facility in Grand Rapids -- and I think if the utilities would come out with a new tariff rate where we could avail ourself to the index, this would increase our savings across the board. Thank you.

PAUL BECK: Good afternoon, ladies and gentlemen. My name is Paul Beck, and I represent myself.

Myself, I have a place in Huron County where the windmills are fast and furious, or slow and furious. The windmill costs are pitting the residents

against DTE and other manufacturers that want to put the windmills up. Friends and neighbors that used to talk to each other are no longer talking to each other because of the windmill issue. It's the money versus the people that are getting the money and people that don't get the money, number one.

And number two, to be successful in the windmill business, you have to have batteries to store the energy. As of today, there is no such battery available to store these energies. We can not depend on the wind for any type of energy progress.

I hate to say the word nuclear, but nuclear is very cost effective, very efficient, and creates jobs, meaningful jobs that are long lasting. I was talking to a DTE manager, and he told me that it takes anywheres from 8 to 12 years to put a nuclear power plant on line, and jobs that will go from, anywheres from 1,800 to 3,000 jobs, good paying jobs, and then after it's already built, for the economy in that area, there will be 400 to 500 jobs, meaningful jobs, that filter down into the community.

Competition, which has been talked about all day today, is very important to the energy program. We need more competition. DTE and Consumers have a monopoly on it, we need more competition.

And that's all I have to say. Thank you for your time.

STEVE BAKKAL: Thank you. Again, I remind everybody to please stay within the three minutes. I'd like to get as many as possible.

Next four speakers are Wible Heymach, Josh Barclay, Mike Handley, and Virginia Shannon, if you could all come up to the front, and Wible, please come up to the stage.

Also, if you have any prepared remarks, please leave those behind, they'll greatly help the court reporter. Thank you.

WIBLE HEYMACH: Hello. And thank you so much for having me. I now realize there's different --

I work for an organization called Mom's Clean Air Force, we're a children's health organization, we have about 130,000 members nationally, about 5,400 in Michigan, and we often talk about energy as a question of which source to choose or what the difference in prices are, and what new technologies work and which don't.

One of the things that we do not talk about often enough or in as much detail is the cost to our health and to our children's health and what that ultimately means to the prices that we're paying.

Coal-fired power plants produce 360,000

tons of hazardous air pollutants every year in the United States. They're the primary source of toxic emissions and responsible for almost three-quarters of mercury air emissions. Small pieces of particulate pollution from Michigan's nine oldest coal-fired power plants cause Michiganders 1.5 billion in healthcare costs and damages every year. That's $500 for each family of four in Michigan.

Michigan currently ranks fifth in the nation in premature death, hospital admissions and heart attacks attributed to coal-fired plant pollution. Looking closer at those numbers, 180 premature deaths, 333 hospital visits, and 68,000 asthmatic (inaudible), as well as 72,000 missed school and work days happen each year in Michigan due to coal plant pollution.

The ozone action days last year have been a record high in Michigan, preventing children, especially those plagued with asthma, to play outside while they were in effect. As mentioned before, over 230,000 children and 700,000 adults suffer from asthma in Michigan, which costs us 394 million in medical costs per year. That's not just the treatment, but also going to the hospital, getting treatment in schools, again, missing school for parents and such.

(Inaudible) has been identified as one of

the largest sources asthma, especially in children whose respiratory systems are much more vulnerable than adults. Less coal-fired power plants emissions will also lower the risk of lung disease and heart attacks.

We've had 530 statewide and water body specific fish advisories in Michigan due to mercury contamination. Mercury is a poisonous neurotoxin that harms the developing brains and hearts and lungs of fetuses, babies and toddlers. As many of the women in the audience know, women are told during the term of their pregnancy that they should stay away from fish because fish often has mercury levels that are dangerous to the fetus. By ensuring that we have a larger percentage of our energy come from renewable sources, our Great Lakes will have less mercury pollution from coal-fired power plants.

We have looked at the hidden costs of coal to our health and our children's health. We believe extending our renewable portfolio is the answer to those health issues. Michigan has been (inaudible) industrial leader, we should continue this tradition; extending the renewable energy portfolio will enable us to do so.

My time is up. Thank you so much for having us.

JOSH BARCLAY: Hi there. My name is Josh

Barclay. I am a teacher at West Bloomfield High School and I am director of our West Bloomfield Initiative for Renewable Energy. You can find my entire presentation at wireWB.org/MIenergy.pdf.

I'm here to talk about net metering and what has succeeded for our State. Net metering is a system by which the electric company allows the customer's meter to actually run backwards if the electricity the customer generates is more than they are consuming. It's been described as providing the most significant boost of any policy tool at any level of government, to decentralize and green America's energy sources. And why we want to do this, especially in Michigan, is because we've got an amazing, an amazing renewable energy resource here.

This slide right here shows Michigan's electrical demand, the bar, blue bars; the green line is our, was a sample of one year of wind speeds, average wind speeds at Saginaw Airport; and the red line represents PV radiation right here in Detroit, and you can see that the profile exactly matches our demand. Where the wind fails in the middle of the year in June and July and August, that's where solar PV really kicks in. And I've been challenged to say, well, you're biased on this because the scale is biased, but really, we have

an amazing solar resource. In fact, Michigan during the critical summer months when PV kicks in has more solar radiation than Miami, Florida, does. Most people don't realize this. When PV really matters is during the summer, and that's when it generates the most, even more than a solar array would in Miami, Florida.

I'm here talk about, briefly about net metering. It's been wildly successful for the Category 1, under 20 kilowatts. As you can see, the rate of the number of customers has radically increased for under 20 kilowatts. This is not a mistake. The Category 2, over 20 kilowatts, there has been barely any movement in the number of people net metering. In fact, this is the -- while the under 20-kilowatt category has grown exponentially, doubling every year since 2009, over 20 kilowatts has barely been a trickle. There are only 4 customers statewide over 20 kilowatts.

Why is this? We must ask this question. Could it be because of cost? Well, in fact, that can not be the case. Cost goes down as you have greater economies of scale. So what could it possibly be? Is there some magical price point at 20 kilowatts that makes it impossible? Well, in fact, we have to take a look at our policy. Michigan's net metering policy is very progressive, and in fact, we got an A for it with the

Freeing the Grid document, and that's because under 20 kilowatts are credited at full retail rates, while over 20 kilowatts shall not have net metering credits applied to distribution charges. That is a major disincentive, and I think we really need to take another look at our policy so we can take advantage of our amazing renewable energy resource here in Michigan. Thank you.

MIKE HANDLEY: Good afternoon. My name is Mike Handley, and I'm a member of the Communications Workers of America, or CWA for short.

CWA is the largest telecommunications union in the world, representing over 700,000 men and women in both private and public sector.

I stand here today because I believe that investments in renewable energy are important ways to create jobs and grow the local economy. Continuing these investments are key to creating the fair and safe job opportunities that all Americans deserve.

I'm here to respond to the question: What are the related costs and benefits (regarding affordability, reliability, and the environment) of a range of possible energy efficiency standards, including maintaining our current standard, and increasing it to various levels?

Michigan's current renewable standard is

helping to grow renewable energy capacity.

The benefit of the existing standard is that it is already working to reduce pollution and give Michigan cleaner and healthier air and water, protect our Great Lakes and benefit public health.

One of the many benefits of the existing standard is that it's already created thousands of good job here in Michigan.

According to the Michigan Public Service Commission, Michigan's existing renewable energy standard has resulted in $1.79 billion in investment through 2012.

Renewable energy investments in the wind and solar industries, for example, are off to a good start cross the State.

Apart from the 4,000 to 5,000 jobs that exist in Michigan's wind industry, approximately $7 million in annual property tax payments goes to wind project owners and annual land lease payments total over $1 million.

The economic benefits of the existing renewable energy standard are significant. On average, each clean economy job in Michigan produces $26,589 in exports, which ranks it 13th on this measure.

The estimated median wage in Michigan's clean economy is $40,558. This compares to $38,024 for

all jobs in Michigan.

According to the American Wind Energy Association, generating wind power creates no emissions and uses virtually no water.

The wind power installed in Michigan will avoid 930,000 metric tons of carbon dioxide annually.

To compete against the world in clean technologies and ensure we leave future generations a better environment, we need to start now.

We need to fight for a better future for our children and grandchildren, and that means investing in renewable sources of energy. We can create new jobs with good wages and benefits, bring back jobs from overseas, and secure our current jobs, all while protecting our environment and reducing our dependence on foreign oil.

Our leaders need to show leadership on this. We can and we will continue to create the jobs of the future in cleaner, more efficient technologies. Thank you.

VIRGINIA SHANNON: Hey, everyone. My name is Virginia Shannon, and I'm the state associate with Environment Michigan. We are a statewide citizen-based environmental advocacy organization, and we work to protect our air and our water and our open

spaces.

As we all know, Michigan is known for our Great Lakes, and the importance of the Great Lakes and our waterways really can not be overstated. It's the life blood of our State and vital for our economy and our livelihood, as well as our drinking water and the health of our ecosystems. And the gas and oil industry is threatening Michigan's most precious resource by injecting millions of gallons of fresh water mixed with toxic chemicals into the ground for fracking. And really there's just too much at stake with our waterways and the Great Lakes to invest in this risky fracking. So instead of putting our water and our State at risk, we need to invest in clean energy and energy efficiency.

It's really no surprise that wind power is good for our environment; but a new report we released this fall called Wind Power for a Cleaner America for the first time quantified the global warming pollution avoided and the environmental and public health benefits that Michiganders can see with even more wind power.

Our current power generation from wind energy in Michigan displaces as much global warming pollution as taking 48,000 cars off the road each year. And if wind development continues at this pace comparable to the recent years through 2016, Michigan would reduce

global warming pollution by as much as taking an additional 169,000 cars off the road. More wind power will also help reduce harmful air pollution that threatens our health.

Natural gas and coal-fired power plants produce several wind pollutants -- I mean air pollutants that put the Michiganders' children and adults with asthma at risk for attacks and health problems.

Additionally, the reality is we have a vast untapped solar resource, and we get more sunlight than Germany, which is the world's leader in solar power. And as solar continues to get cheaper with the cost of panels dropping by 75 percent since 2008, we are at a great position in Michigan to benefit from this growth. And solar employment is also expected to grow nationwide by 17.2 in 2013, and to add nearly 20,000 new solar workers.

So for Michigan to continue to reap the benefits for our environment and our economy from investing in renewable energy like solar and wind power, we must invest wisely in a future with cleaner air and smarter use of our water resources.

Environment Michigan and myself urge Governor Snyder to put Michiganders first and invest in these clean energy resources because our clean air, water

and children's futures depend on it.

STEVE BAKKAL: Our next four speakers are James Harrison, Amanda Godward, Bill Ross, and Steve Toeppner, if you guys can come up to the front, and James come up to the podium.

JAMES HARRISON: Good afternoon, folks. Commissioner Quackenbush, Director Bakkal. My name is James Harrison, I'm a national representative for the Utility Workers Union of America. I focus on Region 4, which includes Michigan.

The UWA's roughly 50,000 members work in the electric, gas and water industries across this nation. In Michigan, we have roughly 9,000 members in local unions, the vast majority of whom are employed in the energy industry. Utility employers for whom our members work are Alpena Power Company, Bay City Light and Power, Cherryland Electric, Consumers Energy Company, City of Croswell Public Lighting, The Detroit Edison Company, Grand Haven Light and Power, Midland Cogen Venture, Traverse City Light and Power, Utility Lines Construction Company, the contract firm that operates and maintains the International Transmission Company's infrastructure, and Zeeland Power and Light. Collectively, these highly-skilled women and men work 24/7 in generation, distribution, transmission, field

service, customer service, design and planning to ensure that Michigan's consumers receive safe and reliable energy to power their homes, their businesses, and their communities.

We commend the initiation of this proceeding, and we share the State's interest in identifying data needed to make sound choices regarding Michigan's energy future. UWA is very familiar with developing Michigan's energy policy. We played a role in helping to develop and pass both 2000 PA 141 and PA 295 energy laws. And as an aid to your efforts, we have begun, have begun, but not yet completed, compiling what we believe will be relevant and helpful information. In part, this data comes from a highly reliable source, our Michigan members. They have daily, first-hand experience in operating and maintaining the State's essential utility infrastructure.

The Union's plan is to submit this information to you in the coming weeks, and I will offer some brief comments today.

Several of the questions that the energy office has identified for examination address service reliability. We think this is appropriate. From the perspective of the union, ensuring reliable and safe service is our members' top priority. Michigan

ratepayers demand and deserve nothing less.

A key question is how to ensure that Michigan's utilities continue to provide highly reliable service, regardless of whether the sun is shining, the winds are blowing, or snow is falling. From our perspective, maintaining service reliability depends on how well you deal with utility infrastructure concerns. The State must ensure that the physical systems operated by the Michigan utilities are well maintained. Our members work with an aging and deteriorating utility infrastructure, the consequence of years of inadequate maintenance and negligent. Michigan's energy future requires utility infrastructure that is well maintained and replaced promptly when necessary.

Along with the properly maintained physical infrastructure, the State's utilities must do the first top job of maintaining a human infrastructure. A core component of reliable service and sufficiently well-trained utility workforce. Absent that workforce, the physical systems will not perform as required.

A fundamental question the energy office has identified to be addressed in this proceeding is "What information does energy policymakers need to consider in order to make good energy decisions?" As maintaining reliability is a top priority objective, it

is essential for the PSC to determine whether all the State's regulated utilities are adequately staffed and trained with experienced personnel, and if not, what can be done to remedy the situation. Michigan's utilities will be unable to provide safe, reliable service unless they are both adequately staffed today and undertaking efforts to ensure that they will be adequately staffed in the future.

We suggest that the PSC review annual utility staffing levels since the advent of deregulation. Based on first-hand experience, we know that deregulation has led to staffing cuts, whether through layoff or through attrition. If the numbers of skilled workers is dropping, while the number of consumers and the demands they place on the utility infrastructure are increasing, the ability of an unmanned workforce or undermanned workforce to continue to provide reliable service will be at risk.

In addition, given the concerns about the graying of the utility workforce, the Commission needs assurances that the State's utilities are engaging in forward-looking human resource planning. Concerns about America's aging utility workforce are well known. Indeed, as recently as last week, the National Academy of Sciences issued a report warning about the looming

workforce shortages in the energy industry. Nationally, as of 2010, the average age of an electric or natural gas utility worker was 46.1 years old. By contrast, the Bureau of Labor Statistics has determined that as of 2011, the median age of a worker was 42 years old. By way of example, in 2011 staffing review data at one of the larger major Michigan utilities, the union workforce in excess of 2,000 people, 87 percent of the employees are over 40 years old, while an astounding 50 percent are over 55, and 13 are 60 and older.

In 2011, the Center for Energy Workforce Development, a national group of utility companies, their trade associations, and unions, including UWA, predicted that by 2015, a staggering 36 percent of the electric utility and natural gas industry workforce may need to be replaced due to attrition or retirement. It is equally important to see that this is not a problem that lends itself to a quick fix. Inadequate staffing levels in electric and gas utilities is not something that can be treated to a quick fix.

We note that examining utility levels is well in line with the actions taken elsewhere. The States of Maryland and New Jersey are currently undertaking utility staffing reviews. Those examinations were initiated following the severe Derecho storm, which

hit Maryland last June, and Hurricane Sandy, which devastated the northeast in October. We urge that Michigan not wait for a weather-related disaster and subsequent public outcry over long outages to determine if its utilities are adequately staffed. Michigan should learn from, and not repeat, the experience of others and get ahead of the curve on the important question of utility staffing in relation to service reliability.

Thank you for your time today. Again, our plan is to be able in a few short weeks to assist you by providing detailed information on the status of Michigan's utility workforce.

AMANDA GODWARD: O.K. Well, thank you, everyone, for allowing me to speak today. Thank you Commissioner Quackenbush and Director Bakkal. My name is Amanda Godward, I'm the owner of Ecotelligent Homes. We are an energy auditing and efficiency upgrade company that I started in 2009, and have been continuing to grow due to the increase in demand from Michiganders for a comfortable and energy-efficient lifestyle. My company is also a member of the Detroit Area Green Sector Skills Alliance.

Today I'm go to be talking about a response to energy efficiency Question No. 12. So Question No. 12 asks: Has Michigan and have other

jurisdictions evaluated energy efficiency programs based upon first-year savings and/or on lifecycle savings? And the answer, first part of the answer is that Michigan currently evaluates on single-year or first-year savings. A second part to that answer is that federal energy efficiency projects, among others, are evaluated based on a lifecycle savings, and as defined as the sum of present value of investment costs, capitol costs, insulation costs, energy costs, operating costs, maintenance costs, and disposal costs over the lifetime of the project, product or measure.

This is a tool provided by Energy Star for estimating energy efficiency savings or energy savings both on a single-year or first-year basis, as well as a lifecycle basis. Into this calculator I input to replace a residential furnace that's approximately 15 to 20 years old here in metro Detroit and upgrade it to an Energy Star model. With the single-year savings, you can see that is a projected savings of only $244, that's what our programs are currently able to claim. With lifecycle cost analysis, you would be able to claim $17,000 worth of savings through the life of that measure.

The benefits of lifecycle analysis include that the State of Michigan can quantify the true

energy savings potential and value of energy optimization programs like you referenced in your introduction this afternoon by citing our current program achievements through the lifecycle analysis. It's a better whole picture. Utility companies can then advise energy efficiency improvements to meet energy optimization goals by using the most cost-effective way. By quantifying the lifecycle savings, it provides accurate cost analysis for future program development. Customers can understand the full picture of all the cost benefits of energy efficiency improvements. Lifecycle cost analysis lines up with generally accepted financial guidelines, that's why we use it to present energy efficiency projects to both our residential and commercial customers today. And as demonstrated, using lifecycle basis illustrates more cost savings than just a first-year savings, therefore, energy optimization targets should be adjusted according to to maintain current levels, if not increased to promote future demand.

Thank you.

BILL ROSS: Good afternoon. My name is Bill Ross, president of Booker T. Washington Business Association. BTWBA is one of oldest African-American chambers in the country.

I would like to start off today by

offering a quote, and it says: You can't escape the responsibility of tomorrow by evading it today. Abraham Lincoln. Therefore, I would like to thank the Governor, the Chairman and the Director for honoring that quote by Abraham Lincoln.

First I'd like to say that, why I support the Governor's approach to addressing this important issue. From my perspective, the current environment for energy in Michigan, the role electric power plays in the success of our members suggests that the current law is working, based on the fact that our economy is growing and lights and energy are available to support this growth. So I ask the question, why raise the 10-percent cap and move to a deregulated market that risks the 100-plus year history of providing power when we need it?

In 2008, a bipartisan legislature passed energy laws as a suggestion that the State's largest investment in renewable energy came about. The Governor has taken that model as his blueprint in the area of energy initiatives, which means his position ensures that Michigan will have a successful energy policy that focuses on what I call the RAP, and it's been referred to by several speakers today. RAP stands for reliability, affordability, and protecting the environment. And more importantly, the current model provides opportunities for

businesses to participate in the State's recovery.

Support and investment in programs like Pure Michigan Business Connect Initiatives, as well as with its favorable business environment, Michigan-based small, mid-size and large companies can create more jobs because of demand for their goods and services.

How do I support that statement? Let's take a look back over the last three years by what DTE Energy did, has spent with the suppliers in Michigan. In 2010, it spent 475 million; in 2011, it spent 598 million; in 2012, it spent 826 million. That's a 42-percent increase in the dollars spent with suppliers in Michigan from 2010 to 2012. That tells me that DTE's demand for goods and services has increased because of a favorable business environment, thereby increasing its overall supply chain expenditures to 1.9 billion for that 3-year period. And better yet, that expenditure made way for the creation of over 7,000 full-time jobs in Michigan last year. And I suggest to you, ladies and gentlemen, that there are many recipients of those 7,000 jobs for the mothers, the fathers, the brothers and sisters, for aunts, for uncles, the nieces and the nephews and children of many of us in this room and others that we know throughout southeastern Michigan.

Nevertheless, the question remains, can

the current energy regulation model be improved? Without a doubt, the answer is yes. So let's see, ladies and gentlemen, what that reform has that's important. Because it gives us, the customer, an opportunity to participate: 1, in a meaningful discussion around the issue; 2, make known our believable and reliable and quality services at a reasonable price is addressed; and 3rd, which is very important, these types of forums can help showcase how current efforts have helped businesses and residents become more efficient in the use of energy, which support programs designed to directly assist them in the management of their energy usage.

For example, local utility provider for me and many of our members throughout Michigan is DTE Energy. It has invested more than 2 billion in renewable energy, which includes wind and solar, as a result of a 2008 energy policy. Further, DTE plans to spend more than 600 million on environmental upgrades based on the current Michigan policy. Therefore, we need to look that current system has been successful before suggesting changes, and then ask the question, how can we support the current energy model while looking for ways to improve it, not just for the sake of change? That's the kind of mindset that can assist us in having fruitful and constructive discussions and help lead to the best energy

policy possible for the citizens and the businesses of Michigan.

In closing, I would like to say, with a stable and predictable regulatory infrastructure, utilities such as DTE Energy can continue providing safe and reliable electricity within the State, which will lead to greater capital investment, therefore allowing providers such as DTE Energy an opportunity to generate additional job growth and offer more affordable rates to its commercial and residential customers. Thank you.

STEVE TOEPPNER: Chairman, Director, thank you for the opportunity to speak today. Hello, everybody. My name is Steve Toeppner, I am the general manager of WellHome, part of Masco Contractor Services in Taylor-based Masco Corporation.

At WellHome, we are a home performance contractor; like those that have come before me, Amanda and Clayton, we do energy assessments and home improvements that drive energy efficiency to primarily single-family homes here in Michigan, and I'll stand before you as an advocate of energy efficiency programs, those that we believe work well throughout the State of Michigan. Masco has continued to invest in us since we were founded in 2009. We've grown every year, started with 4 employees, we added another location in Grand

Rapids, and currently employ 16 here in the State of Michigan, again driving energy efficiency for single-family homeowners throughout the State.

What I came here to talk today about is a few of the questions that Governor Snyder had put before us, specifically given our current technology, how much energy efficiency is technically feasible in Michigan, and what's the remaining cost-effective energy potential in the State? So I'm going to talk about a study that we recently did of 106 homes, granted a small subset, but a very clear indication of the opportunity that exists out here.

As a pure home performance contractor, we do see tremendous remaining residential efficiency opportunity. In more than 9 out of 10 homes that we go into each day doing our energy assessments, the data supports the observation that the potential is greater than 20 percent in energy savings in every home we go into, and again, that's 9 out of 10 that we visit. Our work with the Better Buildings program for Michigan, the Michigan Saves energy loan program, the EO programs, and then the recent utility study that I mentioned a moment ago have informed us of this.

In that recent utility study, again, it's 106 homes, the average age of those homes were 1965, or

48 years. Average utility bills was $2,417. In the improvements that we made, which included insulation, air sealing, furnace upgrades, air conditioner upgrades, lighting upgrades, windows, essentially every major traditional technology energy efficiency improvement that could be installed, we achieved a 20.7-percent energy savings, of which 23.5 percent came on the gas side, 8.4 percent on the electric side. Interestingly as well, 26 of those job were financed through Michigan Saves at a $7,768 financed amount, so clearly there's a strong contribution from the consumer side that helps to achieve that 3.51 balance of savings.

Some of the other important points to make, we had -- we still see very clear opportunity. As I said, in 92 percent of the homes we visited, they needed air sealing improvements, and 88 percent in turn needed insulation improvements; 61 percent needed the HVAC, so tremendous opportunities out there.

Of the total program energy savings, 88 percent of them came from air sealing and insulation and furnace upgrades, so those three specific measures drive the majority of opportunity. Said another way, 2/3 or 62 percent came from air sealing and insulation, and 26 percent came from HVAC, specifically furnaces.

Lastly, in conclusion, we do recognize

the need for energy efficiency improvements in our housing stock, it's critically important to us, and the opportunity exists that greater than 20 percent per home, existing technology, not magic, it's traditional technology that's existed for years. Customers are more inclined to participate in an energy efficiency program when there's a trusted name promoting it, like public utilities, like Better Buildings for Michigan, like regional and state energy offices and Michigan Saves. Next, consumer incentives and trusted source marketing will continue to be necessary to drive action.

I'm thankful to be able to see today several studies that show energy efficiency does make tremendous sense and tends to be a terrific investment. That said, we still do need incentives and trusted source marketing to drive it.

Deep energy savings can be achieved through contractor-driven programs, which I'm a huge advocate for, putting the incentive in the hands of those that it benefits most is critical. As a contractor, I want to see programs that I can drive and benefit from. And again, as I mentioned before, consumer dollars are an important piece of this as well to get the economy moving, not just for companies like me, but for others that manufacture equipment.

Contractors like WellHome appreciate and want energy efficiency programs like those run by the utilities and Better Buildings for Michigan to aid us in growing our business. Thank you very much.

STEVE BAKKAL: The next four speakers are David Winowiecki -- I hope I pronounced that correctly -- Sean Brady, Victoria Pebbles, and Ed McArdle, if could you please come up. Also, for the people that are out in the lobby, we do have some empty seats in the auditorium, so feel free to come in.

DAVID WINOWIECKI: Good afternoon, Chairman Quackenbush and Director Bakkal. My name is David Winowiecki, I am the manager of Property Management for Art Van Furniture. I'm responsible for the infrastructures, the grounds, the mechanical operations for more than 70 Art Van Furniture stores, Art Van Pure Sleep and Mattress World stores across Michigan, and now we're entering into Indiana, Illinois and Ohio.

I'm thankful to be here to share our views about the energy policy here in Michigan, and I'm pleased that the theme for these forums is Readying Michigan to Make Good Energy Decisions.

It's important to point out I'm also responsible for utility services for all 70 plus locations. My annual utility budget is $5.2 million and

my personal goal is to cut our utility expenses in half over time. As business owners and responsible citizens, we need make good energy decisions in order to achieve that goal. And any decisions that the Michigan Public Service Commission and the Governor and the legislature make about Michigan's energy policies will also affect our ability to meet those ambitious goals.

Having said that our goal is to cut utility expenses in half, you'd think that I'd be here to today urging you to provide greater access to deregulated rates.

That's not our position.

I have alternative electricity suppliers calling me at what seems like every day of the week. They're all saying that they can beat the regulated rates offered by DTE Energy and Consumers Energy. Their offers all seem to be in the neighborhood of a penny or less per kilowatt hour than our regulated rates.

If our decision to purchase were solely based on price, our position might be different. It's pretty clear that the alternative suppliers are looking to sell me energy and nothing more.

That's a far cry from the relationship that I have with our account manager at DTE, Gary Matthes. He's continually reviewing electricity usage in

our stores in the DTE service territory, he's always looking out for us and helping to manage the usage and to lower our bills by ensuring that we're on the most appropriate rate plan, as well as providing advice on the energy optimization programs.

Contrast that with the typical sales pitch from a nonutility electric marketer, which I'll say as: Hey, I can always sell you energy as a cheaper rate.

Our partnership with DTE Energy on energy efficiency efforts has already helped us reduce our electricity usage by more than 20 percent in less than two years, or in utility terms, that's more than 41,000 kilowatt hours per day. We've installed energy management systems, we've replaced with LED over 40,000 incandescent lamps, and we're also installing motion sensors.

We'll be focusing on natural gas usage next. We're in the process of specifying new HVAC units to garner greater energy efficiency, but that will be a longer-term project.

Right now we're doing HVAC tune-ups to make sure that we're getting top-notch performance from our existing equipment. We're also doing things like replacing our automatic doors.

If you think about a manual door, they're

not open for nearly as long as an automatic door. By switching to manual doors, we're avoiding energy use associated with operating the automatic doors, and we're also avoiding filling our atriums with hot or cold air, depending on the season, which forces our heating and cooling equipment to work a lot harder than needed.

These are examples of good energy decisions.

They are the product of a real partnership with my account manager and our Michigan utility company, companies, and kind of a holistic view encouraged by the Michigan Energy Optimization Initiative.

We feel that that positive examples should be encouraged, explored and expanded by any change to Michigan's energy policies moving forward.

Thank you for the opportunity to speak with you this afternoon.

SEAN BRADY: Wow, it's bright up here. How do I get this? Good afternoon, Chairman and Director. My name is Sean Brady, I'm a regional policy manager for Wind on the Wires. Wind on the Wires is a not-for-profit organization that addresses wind energy issues here in the Midwest ISO.

What I want to talk to you today about is

the affordability of large-scale wind energy here in Michigan. I want to make two points. One, it's affordable now; and second, large-scale wind could be affordable, help make electricity rates affordable in Michigan over the long term.

So addressing the first point, this is kind of cuing off of a point that Chairman Quackenbush made earlier today. The four more recent contracts entered into for wind energy have ranged between approximately $48 -- between $52 and about $64, which is comparable to the weighted overall cost of power here in Michigan. So it's already currently comparable to your energy costs here in Michigan.

The second point -- I'll leave these slides with you, but I'm going to skip down since we only have three minutes. I want to take a look at this slide. This slide provides a forward look of natural gas prices as prepared by the United States Energy Information Administration. They prepare annual outlooks. And this slide shows their forecasted natural gas prices, which I show primarily in -- what the median prices are shown in heavy black lines and the gray shows the upper and lower limits.

So if we apply that slide to this slide, which we also saw from Mr. Scripps earlier today, this

shows, the red line shows natural gas prices currently, and if you add on the potential gray area, what the potential natural gas prices could be over the next 20 years; and then the blue line is the average wind energy contract prices over the last two years throughout the United States, which ranges between $42 and about $50. So all the gray area that's above the blue line is potential natural gas price that will be above the cost of energy, of wind energy, and therefore, wind energy provides a potential hedge over the next 20 years for that.

Moving on to the second slide, or my last slide, this shows I've added, if we're moving towards a natural gas environment, we're looking to build new natural gas plants. So we need to account for what those gas, costs on those gas plants. The Energy Information Administration forecasts the levelized cost of natural gas plants to be about $64 to $66 per megawatt hour, which is also above the cost of current contracts, and even if you add the production tax credit into -- we lose the production tax credit, we'll still be somewhat cost comparable to natural gas, and there's still a large amount of potential natural gas prices in the gray above the blue line that that could be hedged.

So I see my time is concluded, so I'll

just close up by saying large-scale wind energy right now is cost competitive, and you should be looking at future cost prices and where the market will be of energy serving Michigan and accounting for that, and that large-scale wind prove to be a hedge over the next 20 years. Thank you.

VICTORIA PEBBLES: Good afternoon. Thank you for the opportunity to make brief remarks today. I'm here today -- my name is Victoria Pebbles, and I'm here representing a coalition of stakeholders called the Great Lakes Wind Collaborative. In the interest of full transparency, I'm employed by an organization called the Great Lakes Commission, but I'm speaking on behalf of the Wind Collaborative, which is a project that the Commission manages.

The coalition that is comprised of the Great Lakes Wind Collaborative represents state, federal, local, nonprofit, academic, utility, industry interests. They share a common thread, and that is wind energy development across the bi-national Great Lakes region, sustainable wind energy development. So to get together, they know that there are some challenges, but that they share a belief that they can be overcome, and that there are some inherent advantages.

All of the Great Lakes states and the two

provinces have renewable portfolio standards, so the Great Lakes Wind Collaborative engages in activities to support smart and sustainable energy policy and practices.

Affordability should consider the price of the energy source, of course, the fuel. In the case of wind, the fuel is wind, and that's free, at least for now, and it's also of limitless supply. Unlike coal or natural gas, the price of wind will never go up or down with market cycles. Affordability should also consider the cost of turning the fuel source into power. Converting wind into power requires turbines. The cost of wind turbines has varied in the past decade, but has declined since 2008, while capacity factors or the efficiency of wind turbines has gone up. The most recent contracts by the Public Service Commission in a recent report showed that the levelized costs of wind energy are well below those of advanced coal-fired power plants. Wind in Michigan has become cost competitive with natural gas, and it may, as the previous speaker alluded to as well, have the benefits of hedging against the possibilities of natural gas fluctuations over the long term. So increasing the share of wind power in Michigan makes sense from an affordability and cost-effective standpoint.

On reliability, we know that wind doesn't blow the same intensity across the same area at all times, but it's important not to equate variability with unreliability. They're not the same. Studies have shown that wind variability can be diminished through transmission improvements, for example. Efforts like the North American Electric Reliability Corporation integrating variable generation test scores, like that one, are looking at this and trying to improve the transmission so it can balance the power with renewables. The Great Lakes Wind Collaborative believes investments in transmission and improved coordination and accountability among the regional transmission organizations can improve electric power system reliability and balance power to deliver timely, clean, and renewable energy, including wind.

The wind energy value chain also offers fewer risks or links in that chain that can be broken, in contrast to fossil fuels, which must be extracted, processed and transported. Each of those steps has risks. We are all familiar with the 2010 Enbridge incident that leaked more than a million gallons of water [sic] into the Kalamazoo River, a tributary to the Great Lakes; and some of you might also have heard of the 2010 natural gas explosion in California in San Bruno which

killed eight people.

The Great Lakes Wind collaborative believes in investments in transmission and improved coordination among RTOs can deliver clean renewable energy, including wind.

On the third theme, no regrets. The vast majority of power in the Great Lakes is thermal electric generation, which uses a vast amount of water, more than 24 billion gallons every day, for example, and there are additional considerations if we doesn't want no regrets; impingement (inaudible), mercury emissions we heard about earlier, carbon, and (inaudible) impacts on the ecosystem from climate change.

The nexus between thermo-electric power generation and water use should be an important consideration as we move forward developing new energy policy for the State of Michigan.

This current slide has just a quick overview of the current installed capacity as of mid 2012 across the bi-national Great Lakes region.

I was also going to talk about a study of jobs and economic development impacts was recently done; it's in my written remarks that I provided to the staff. So thank you very much for your time.

ED McARDLE: Hi, folks. I'm Ed McArdle,

I'm the conservation chair for the Southeast Michigan Sierra Club and Michigan Sierra Club. I'm a volunteer, we have a lot of staff people, we have other volunteers who would probably like to speak, too. We have 5,000 members in the southeast Michigan area.

So I'd like to address the bad stuff, the extreme energy path that Michigan's going down, and I think the policymakers, in response to the Question No. 1, need to consider first, the effect on greenhouse gas emissions. The carbon dioxide load in the atmosphere is now at 394 parts per million. The Union of Concerned Scientists says it hasn't been that high in the past 800,000 years. Think about that. I asked scientist at a talk that was drilling through the ice in Antarctica down into the ocean sediments, I asked him that question. He said, oh, 40-45 million years since we've had it that high, in his estimate. I was shocked. So we have to consider that, because now we are in uncharted territory as far as climate goes.

Secondly, high priority must be given to the impacts on the water use for energy production. The dirty, extreme energy producers, such as coal-fired power plants, hydrofracking for gas and oil, oil refineries, nuclear power plants, use huge amounts of water, killing millions and millions of fish and larvae when they suck

it in, plus thermally polluting, and then we're stuck with the buck end of all this. We're the ones that have to clean a lot of this up and dispose of it.

Michigan is surrounded by the Great Lakes, and 40 million people rely on the Great Lakes for drinking water, recreation. I mean, we're the Great Lakes State more than any other.

So also the transportation of raw material, chance of severe accident or exposure to routine processes should also be a consideration. As an example, the 2010 tar sand oil spill in the Kalamazoo River still isn't cleaned up, may never be. The storage of waste products and the transportation of waste products like coal ash, petroleum coke.

I'd just like to say something about Marathon and the petroleum coke piles down by the river that you can see. We're getting more and more tar sand oil through that refinery creating pet coke, which is far more problem intensive than even coal, and Detroit, DTE has in a permit of 26,000 tons per year that they can burn as pet coke. So that's going backwards. O.K. And, you know, when we're bringing tar sand oil into Michigan, the dirtiest oil in the world, the biggest construction project in the world, by Enbridge Pipeline, there is a proposal to bring in more tar sand oil than the Keystone

Pipeline. I think this is going backwards. I mean bless Ford Motor Company for all their energy efficient vehicles, but that doesn't make up for the three or four times greenhouse gases emitted by use of tar sand oil. So we got to stop there.

And the environmental justice must also be considered, because not only are people of color and the lower income most subjected to the pollution impacts of dirty energy, but also the increasing costs of dirty energy.

So I would like to address a couple things that I don't think I can address today too well, and one is the reliability question. So in one respect, the expansion of wind, solar and other renewables lessen the load that, the need for base load power. Everybody's into base load power, right. O.K. But the wind is always blowing somewhere, and can easily be dispatched over the grid. The grid is designed for offline events when facilities are shut down for routine repairs or accidents.

There's an article in the peer-reviewed journal Nature which quotes a study in Germany that little power storage or backup is needed to achieve 40-percent renewable supply. Denmark already has 40 percent without backup. And Michigan, I'd like to remind

people, already has a giant battery in the form of Ludington Pump storage facility, which pumps water from Lake Michigan up to a reservoir during the night when demand is low, and then can be released back during peak demand hours. And a joint project by DTE and Consumers it's going to be expanded to 2,100 megawatts. O.K. That's more than the proposed Fermi 3 nuclear plant.

By the way, Fermi 3 is predicted by DTE to cost $15 billion. So I got to ask you, how many solar panels, how many wind towers can you get for that 15 billion? And we think it's 20 billion, because they're not factoring in the expansion of the transmission grid.

O.K. I would also like to bring up a form of energy that is often overlooked because it's not really sexy like renewables, and that's combined heat and power, or grade power. Now, I don't have any figures for Michigan, but I don't think Michigan's that much different from another industrial state like Ohio. Renewable Energy Development has done a study on Ohio, and Ohio has as much potential to produce electricity (inaudible) to eight nuclear power plants at lower cost than coal and nuclear and natural gas. O.K. And you know, we have steel mills, we have paper mills, we have large (inaudible) where it could be driving turbines. I know some of this is already being done, but the

potential is far underestimated.

O.K. One other thing, then I'll -- O.K. My three minutes is probably up. Sorry.

O.K. One other thing. As far as that energy go was install a construction (inaudible). And this is very unpopular in other states. In other words, ratepayers will have to start paying for these large facilities before they get any electricity from it, and in the case of nuclear power plants, a good portion of the ratepayers will be dead by the time they get electricity from it. So thank you.

STEVE BAKKAL: Thank you, all. Our next four speakers are Julie Lyons Bricker, Scott Viciana, Anand Gangadharan, and Janet Wright.

Also, for the speakers, I've been requested, please speak into the microphone for the people in the audience. And for the speakers that are going to be going over, I'm going to be providing your e-mail address to the people that won't be having a chance to speak and who yell at me at the end, so please stay within your allotted time.

JULIE LYONS BRICKER: O.K. Thank you, Chairman Quackenbush and Director Bakkal, for offering this chance to speak today. I am Julie Lyons Bricker, the director of Michigan Interfaith Power and Light. And

that organization is a nonprofit aimed at assisting houses of worship across the State become more energy efficient, implement renewable technologies, and other sustainable practices. We are celebrating our tenth year as we speak this year, and have more than 185 congregational members across the State.

Today I'd like to talk a little bit about a project that we are just now closing out, it was in partnership with DTE Energy, and it's an energy efficiency program aimed at houses of worship. So as you can see on the map, we have 48 congregations in Detroit proper, and these congregations participated in this energy efficiency program. They were many denominations. The building sizes ranged from about 4,000 square feet to 100,000 square feet. Congregations were of many different ages and different levels of energy efficiency needs. Another point we'd like to say is that the congregations who participated were from a number of different denominations.

So back to the project, as can you see, there were three major pieces to this energy efficiency project: The energy assessment, the direct install products, and then a tracking through the portfolio manager EPA Software System.

Unlike some of the other energy

efficiency programs we've heard about today, all of these changes, the energy efficiency measures that we've used for this program were very basic and inexpensive, so the payback was relatively quick. You can see some of the items that we used here.

So here is a chart of our data savings from November of 2011 to November of 2012. We had an average savings per participant of more than $2,300. The cost savings project-wide for this 12-month period was a little bit more than 11 percent, and the energy usage index, the EUI percentage savings was close to 6 percent.

One of the best things that we have found throughout this data tracking is that 96 percent of the project costs were paid back within this first 12-month period. Also, many of these congregations are using their energy usage savings to offer more services to the citizens in need within their faith communities.

So a couple of additional outcomes from our project. We will continue to track the participants' energy usage throughout this year. Another aspect of the program is to assist with behavioral changes within these faith communities. We intend on offering another portfolio manager training program, and as you can see on the slide, about 33 percent of the participants have already done one version of that training.

Because -- and then a second piece is because of this Energy Star EPA Portfolio Manager tracking that we are doing, six of our participants moved forward to apply for the Energy Star Building Certificate. And we in fact just learned from the director of the EPA Small Businesses and Houses of Worship that four of those six have come through approved, so we'll be sending out the news to the four congregations. And we also learned that Michigan has been propelled to first place in terms of the number of houses of worship with Energy Star Building Certificates in the country. Thank you. And the best thing is we still have two in the pipeline that no doubt will come through.

O.K. That is a great segue to my request to you both and to this process. Michigan is innovative, Michigan is strong, Michigan deserves to have a more progressive energy efficiency and renewable standards in place. There's no reason for Michigan to be behind so many other states at this point. So we ask that you please defend and strengthen our EE and RE standards. Thank you.

ANAND GANGADHARAN: Commissioner Quackenbush, Director Bakkal, thank you for the opportunity to speak. I'm Anand Gangadharan, president

of Novi Energy. We are an entrepreneurial small energy project development and consulting firm based in Novi, Michigan, and have been doing business since 2002.

We were the developer, construction manager and partial owner and operator of the Fremont Community Digester. This is a $22 million anaerobic digester project that was built in Fremont. It's currently being commissioned and operated. The Fremont digester recycles 100,000 tons per year of organic waste, and digests it into biogas, which fuels engine generators to generate three megawatts of base load electricity. The fuel here is organic waste that would otherwise be sent to landfills or be land applied to disposal.

This plant also produces as byproducts fertilizer and compost, enough to fertilize approximately 5,000 acres of corn crop annually. There is no other waste left over from this plant. We don't even have a waste water connection out of our processer of our plant.

We also reduce greenhouse gases, gas emissions by over 75,000 tons of carbon each year. This is just about the same value that Mr. George Andraos of Ford Motor Company talked about in 2012. They reduced about 74-75,000 tons of carbon. So a single anaerobic digester plant of ours produces and has that same environmental impact and footprint -- I didn't know this

until today -- as Ford Motor Company.

Anaerobic digesters benefit the environment because they take organic waste that would otherwise be landfilled and use them to make renewable electricity. These digesters also recycle livestock manure that has historically been spread as raw manure on farm fields. Excessive manure from CAFOs, confined animal feeding operations, is an active environmental problem in Michigan today. There are areas such as in the Michigan thumb where excess nutrients from CAFOs farming operations have been leaked into ground water, causing algae blooms and muck along the beaches of Saginaw Bay. Anaerobic digesters have a role here and can help alleviate this problem and improve Michigan's environment.

Although anaerobic digesters generate at a slightly higher cost than a new gas-fired power plant, they are small generators that provide an environmental benefit to the State, and are not significant in terms of the State's total electricity costs. They are a benefit to the State's environment.

Novi Energy estimates Michigan's organic waste production could support at least 10 more anaerobic digesters the same size as the Fremont digester around the State. I'm here today to urge Governor Snyder and

the Michigan Public Service Commission to adopt policies that incentivize the State's electric utilities to contract more from these anaerobic digesters, not only to give the State more base load renewable capacity, but also to help clean up watersheds and improve the environment.

Energy technology diversity is important. Let's ensure the long-term stability and value to Michigan and take positions that improve the quality of life and affordability of our Michigan communities. Thank you.

SCOTT VICIANO: Good afternoon, Chairman Quackenbush and Director Bakkal, good to see you today. My name is Scott Viciano, I'm the vice president of sales and business development at a company called Ventower Industries. We're happy to be here today and really trying to present some perspective on a tangible company doing business in renewables, and more than anything, representing and embodying the success of PA 295, and creating jobs, being a catalyst in the community.

So I'm just going to give you a quick summary about what we do. Ventower fabricates, really gives turnkey solutions for distributed wind and utility-scale wind turbine towers. The company was formed in 2008. We began with construction on a

brownfield site within Monroe County, actually at Port of Monroe, and the site, we kind of walk the walk, talk the talk by revitalizing a brownfield site. The footprint worked well for our process, and has turned out to be a real advantage so far. The overall project investment that we put into it was about a $25 million project, received a lot of support on the State level, community, private equity as well. So it's so far-so good, turned out well.

Our customer focus is on the OEM, the original equipment manufacturer, and some of the wind developers as well, so we call on folks like the GE, Siemens, and if you're familiar with Wind Vestas, Gold Wind, et cetera, of the world.

Our facility was built and it's purpose built to fabricate wind towers, and we really have some of the industry's most technologically advanced welding, rolling and painting equipment. If you're not familiar with wind towers, we're building towers up to a hundred meters in height, not one section only, and let me dispel that in a hurry, but usually three or four sections in size, so it's some pretty impressive equipment. Our team has an extensive operational, engineering and fabrication experience within the industry, and we've been able to tap into some of the resources here in the State, of

course.

I mentioned our location, which is at the Port of Monroe, which has proven very good for us, been able to look at water-borne logistics, rail and interstate as well, we've used all three to deliver towers.

So fast forwarding, our production started in 2011, we've had six orders from four major OEMs in the wind world, so to speak, and we completely, we've delivered four of them already, on time and successfully. Current jobs we've created, about 57 employees as of today. By the end of August, we look to have that number to about 80. So business is picking up. More validation on some of the legislation that's been put in place and helping support our efforts.

We will also have a target -- we'll have the capacity of two three-section towers per week, and by 2014, we'll be ramped up to 200 towers total per year. Really exciting stuff.

So to kind of fast forward real quick, our basic perspective and really why I'm here is just some validation as to PA 295 and the policy and the certainty it's provided for us to make investment and to keep growing.

Second is the support and the commitment

that we've seen from the utilities' end of things, supporting Michigan content, from DTE Energy, Consumers as well, they've done a really great job of trying to help make us better. And more importantly, the positive impact that we've provided on the community; economic development, job creation, synergy with community colleges, et cetera. So our hopes is to continue moving along.

Let it -- it's noted that my opinion, it's worked, the policy, and we look forward to moving forward with that one. Thanks.

STEVE BAKKAL: Thank you. Our next four speakers are Melody Steel, Fay Beydoun, Al Folker, and Robert Gordon. Please come up to the front.

ROBERT GORDON: Hello, everybody. My name is Robert Gordon, and I'm also an activist with the State Sierra Club.

I wish I had a white board marker or something, so you have to bear with me. You might remember in the campaign on Proposal 3 in 2012, Detroit Edison spent $17 million to tell us why grandma and grandpa can't pay for $12 billion of investment so we can get 25 percent of our energy from renewable sources. At the same time, as Mr. McArdle pointed out, DTE is planning a $15 million investment in a nuclear energy

facility, which, if completed, would provide 1.54 gigawatts, or about 9 percent of Michigan's energy. I would much rather pay $12 billion for 25 percent than even more for only 9 percent. So it's time to stop this charade of affordable nuclear power. It will never be affordable, it never has been affordable. And let's invest that money instead in truly renewable energy. Thank you.

FAY BEYDOUN: Good afternoon, chairman Quackenbush, Director Bakkal. I'm Fay Beydoun, the executive director of the American Arab Chamber of Commerce, the largest Arab-America business organization in the United States, and it is one of Michigan's largest business organizations, over 1,200 members. I'm extremely pleased to be able to be here this afternoon to speak on behalf of the Chamber and tell about our perspective on the future of Michigan's electricity industry.

As you may know, Michigan is home to one of the largest concentrations of Arab-American communities outside the Middle East, and approximately 550,000 residents. The Arab-American community contributes about 142,000 jobs, or 5.7 of total employment in southeast Michigan, amounting to $8 billion in total earnings in the area. As a result, Arab-

Americans have worked hard and achieved great visibility and success culturally, economically and politically. The number of businesses owned and operated by Arab-Americans, the wide range of community organizations that we support in our active political participation at the local, State and federal levels are all testimony to what we have achieved.

The level of achievement is fueled by energy. First, it is the personal energy invested by American-Arab business owners, their families and employees and associates. Second, it is quite literally the electricity and natural gas provided by Michigan utilities.

Michigan's businesses and families need reliable, affordable energy. That is beyond dispute. Any State policy proposal that jeopardizes access to reliable, affordable electricity should be rejected.

As one of the earliest members of the Michigan Jobs and Energy Coalition, we embrace and support three fundamental goals for energy policy. The first is that any further energy policy must provide a level of certainty to encourage investment in Michigan power plants and the system to deliver electricity to Michigan homes and businesses. From our perspective, Michigan's current set of energy laws has achieved this

objective and is enabling companies like DTE Energy and CMS Energy and others to make significant upgrades to their facilities and systems.

The second policy goal is to enable Michigan utilities to make Michigan's electricity generating portfolio cleaner and greener. Michigan is well on its way to diversifying this portfolio through the construction of the new wind farms around the State. In addition, Michigan's current energy policies are providing families with businesses with ways to get the most out of the money they spend on electricity and natural gas service.

The third policy goal is to provide a platform or base so that energy companies can plan for the long term. I know there has been and continues to be too much discussion about deregulating Michigan's electricity industry. From what we've observed and heard about, deregulation is all about savings over a relatively short term. What Michigan needs is a focus on the long term.

It is my sincere hope that you and the Michigan legislators and other policymakers are likewise guided by the focus on the long-term interests of all of Michigan's residents, businesses and communities. Thank you.

STEVE BAKKAL: The next four speakers are Gary Dillon, Frank Zaski, Lew Banwart, and Sandra Turner-Handy. Please come up to the stage.

GARY DILLON: Director Bakkal, Chairman Quackenbush, I'm Gary Dillon from Dillon Energy Services. We're in St. Clair Shores, Michigan. Currently we are representing over 125 industrial and commercial end users.

Everyone here at this forum is interested in growing the Michigan businesses, and every successful business has to examine its operating costs constantly, and two of the biggest costs are natural gas and electricity. I have worked with companies in Michigan for the last 27 years to reduce their natural gas costs through the deregulated program that we have in our State. The companies that I've worked with have had the ability to choose between the utility and the deregulated third-party source. There was no cap. Companies who are now participating in Electric Choice have enjoyed significant savings, but unfortunately, as we've heard earlier today, it's also created losers and winners. I'd like to give you a couple of examples.

One example is Hungry Howie's Pizza. They have 26 stores participating in the Choice program. Now, they had to move one of their stores about four

blocks from its prior location last year, and because the way the program is structured with DTE, the Choice did not transfer and they couldn't put that new location on to the Choice program. So clearly it's creating a disincentive to bringing new businesses into their chain into the State at this time.

Another example, Superior Heat Treat in Clinton Township. They're waiting in the queue, and they have to compete with other heat treaters in Michigan that are taking Electric Choice, as well as heat treaters in Ohio and Indiana and Illinois that are enjoying more favorable rates.

Shouldn't Michigan businesses have the opportunity to choose?

But Superior Heat Treat isn't the only company that is waiting in the queue hoping to have a choice. As we learned earlier today, there are 9,000 plus other companies that are looking for this opportunity to manage their own electric rates. Now, if things are so good with DTE and Consumers, then why are these 9,000 companies wanting to make a change?

Michigan needs to create an environment that fosters the opportunity for growth, that presents an opportunity that brings companies into our State, that causes them to want to stay, to want to grow, and the

best way that we can see for doing that is to lower the cost of the utility electricity and give them a choice. Thank you very much.

FRANK ZASKI: Thank you, Director and Mr. Chairman. Did you guys know that left-handed people are more intelligent and creative?

O.K. My name is Frank Zaski, I was a member of the 21st Century Energy Efficiency, Energy Efficiency Team, the Michigan Climate Action Council, RCI Work Group, Midwest Governors Association, Renewable Energy Advisory Team, and I am also a DTE and CMS shareholder and ratepayer, and a numbers cruncher in the auto industry.

According to the Energy Information Agency, the EIA, electric rates in Michigan are higher than in eight other states. Our rate increase was 8 percent last year compared to 1 percent nationally. Now, I know our rates have escalated since 2008 due to Customer Choice, people have pointed this out. It's not that simple, it wasn't just Choice cap, rates went up. There are a lot of things. We invested in emissions controls, we invested in renewable energy, we invested in Smart Meters. But I calculated, the numbers cruncher in me, calculated actually coal might be the biggest factor in rate increases in Michigan, because Michigan is still

heavily dependent on coal to generate our electricity, particularly DTE at 73 percent last year. 2008 was actually the beginning of our more recent escalation in fuel prices, for diesel particularly.

Powder River basin coal sells for about $10 a ton. It takes about $25 of diesel fuel to ship it to Michigan; that's five to seven gallons. Diesel prices -- actually, diesel prices have a bigger impact on our electric rates probably than the actual price of coal being mined. Michigan, the trouble is that the problem is Michigan has the worst combination of high dependence on coal, 49 percent this past year to generate electricity, and high delivered coal prices, and we are further away from Powder River basin mines than most coal users.

If Michigan ratepayers pay only the U.S. average electric rate, we would have saved $1.2 billion dollar on our ratepayer -- on our bills last year. This is the same amount the Governor is asking for to fix our roads.

One solution is to slow, to slow the Michigan electric rate increases, to reduce the utilities rate of return on their investments to the national average. In their presentation to investment analysts, and these are the top guys of CMS and DTE -- I'm a

shareholder and I watch their, I listen to them -- they talk about the very constructive relationship with the Michigan Public Service Commission. This is a little bit concerning to me when they use the word very constructive and Public Service Commission in the same sentence. The utilities are quick to point out they are getting a higher guaranteed rate of return on their investments versus their peers in other states. I think they're, depending on the case, they're about 10.55 percent. The U.S. average in 2012 was 10.0 percent, and that is down from 10.2 in 2011, 11 percent a decade ago. So nationally, the rate of return on investment is dropping while our people are enjoying an above-average rate.

DTE and CMS are really quite happy in their presentations that their earnings per share of growth would be about 6 percent a year through the year 2017. Well, that's pretty good. And they point out that their peers in other states are around 4 percent a year. So they're enjoying a very good profit now, and a very good profit forecast into the future, far above average.

The problem with this is that (inaudible), I think they're getting this, but we're paying for it, everybody out here who is a ratepayer is paying for it, and particularly our poorest people, you know, on the street here, they're paying for the

prosperity of DTE and CMS.

Anyway, so one way to cut this kind of impact on our Michigan citizens is to become more energy efficient. And the trouble is we're not very energy efficient. Michigan is very far behind compared to 10 other midwestern states. According to EIA report, residential energy consumption survey, Michigan homes are draftier and they're poorly insulated; homeowners pay more than any midwest state to heat their homes; we keep the heating temperature higher, probably because they're draftier; we're much less likely to clean our furnaces. I guess the EIA asked everything. We also have a lower percentage of Energy Star rated appliances and electronics; and a lower percentage of CFL lightbulbs in Michigan than the 10 or 9 other midwestern states we're behind.

Michigan really needs to continue the energy optimization programs, and even strengthen it to 2 percent for reduction in electric costs, and keep at the 1 -- or the .75 reduction in natural gas savings. This was the unanimous recommendation of the Michigan Climate Action Council, the MCAC, from a few years ago. The MCAC was comprised of utilities, government, academia, environmentalists, corporations, GM, Ford, and an activist. And 52 of the 54 energy efficiency

recommendations were approved unanimously by this broad-based council. So their findings are still pretty timely.

But the utilities probably really don't want to go too quickly into energy efficiency. Even though they get some incentives, it still hurts their profits. One way to (inaudible) is they take the energy efficiency programs away from the utilities is to create a one organization that handles entire Michigan. This would reduce overhead, bureaucracy, inconsistent results, confusion and conflict of interest on the utility part. This organization could be funded to the extent that it would, it would take to do a 2-percent a year electric reduction or .75 in natural gas. And then at some point if that doesn't look like it's paying back, stop it or slow the contributions. A couple other states have successful programs of this nature; Wisconsin, Minnesota -- or not Minnesota -- but Massachusetts and Vermont.

We have a lot of catching up to do, as you can see, because we're way behind.

Another thing is maximize our demand response in Michigan. A FERC study suggested that Michigan potential peak demand reduction is 16 percent. We won't need as much peaking capacity those hot days in

the summer and August if we have a better demand response, so that's interruptible. Air conditioning, interruptible; lighting, interruptible; water heating tied to the pricing or signal. Maybe we could actually use the smartness of the Smart Meters to its fullest extent.

And then the last point, Michigan water utilities need to cut water leakage. According to the Detroit Free Press article last year, Detroit's water system leaks 35 billion gallons of water a year, with a B. This is as much water as used by 16 coal plants. They quote a study, okay, 16 billion -- or 35 billion gallons of water. The University of Michigan reports there's approximately 80 percent of municipal water processing and distribution costs are for electricity. We need to address the electric and water waste in our municipal water systems as well.

Thank you.

LEW BANWART: Hello, and thank you to those that have hung around today. My name is Lew Banwart, I'm a Michigan native and graduate of Eastern Michigan University, currently living in Pinckney, Michigan.

I'm here to give you my viewpoint on a couple of issues; Energy Choice and deregulation. I work

through Integrity Energy Services, we're a small energy broker with over 60 years' combined experience in the energy field. We currently have approximately 30 small and medium-size companies on standby hoping someday to get them out of the energy pricing mold called the queue. I've also spoken directly to at least 20 companies that do not want to even make the effort with the hurdles the queue requires just to get in it.

Energy Choice as it stands today under current Michigan law is in name only. I say that because I have a client that has been in the queue for over two years, and another will reach that milestone in a couple months. Normal expectations are that the queue line will eventually move. Under the current system, it is easy to conclude the queue line may never move. Consequently, there is no Customer Choice.

I would also like to speak a little bit about deregulation. I'm a former airline executive, having spent 20 years at Northwest Airlines. I saw firsthand the deregulation of the airline industry. You talk about choosing winners and losers; that is exactly what the old Civil Aeronautics Board, we called the CAB, did. They set air fares, decided which airports airlines could fly into and out of, and which routes airlines could fly. We could debate the ups and downs of airline

deregulation all day long, but most informed minds will tell you that it is and it was successful. Without deregulation, there would be no low-fare airlines and ticket prices would be astronomical.

Deregulation forced airlines to do a number of things better to compete and survive. They had to become competitive through price decontrol, or what today are discounted fares. They had to become more efficient through route selections and the use of different size aircraft for those routes. And they had to become more productive through technology and through flight and new management systems. In fact, do you know that 91 percent of all passenger miles traveled today are on discounted tickets, and the consumers have saved between 5 and 10 billion dollars since airline deregulation began.

Are there consequences to deregulation? Of course. Those airlines that could not adapt are no longer around or are a part of another carrier. The key here, why I even spoke about this, is airline deregulation in the long run has benefited the consumer. Deregulation has benefited the consumer in other industries we know well, such as cell phones, cable TV and the trucking industry.

I believe we will benefit as well here in

Michigan in a fully deregulated energy market. I estimate that the companies, (inaudible) a few right now, had they been able to make the choice of their energy supplier when they wanted to would have already saved over $350,000.

Waiting in line for over two years and especially not having the right to control your own energy costs are not the ways to rally an economy for small and medium-size businesses. If Michigan lawmakers really want to help them, they need to get out of the way and let the marketplace decide the winners and losers.

Public Act 141 was supposed to offer competition within the electric industry. Deregulation as it stands today with the queue system, simply put, is not working. We need to restructure. Thank you very much for this opportunity.

SANDRA TURNER-HANDY: I have to find the spot where I can see this. Good afternoon. My name is Sandra Turner-Handy, I'm the community outreach director for the Michigan Environmental Council, which is also a member of Zero Waste Detroit. Thank you, all, for allowing me to speak.

Detroit renewable energy waste-to-energy facility, also known as the incinerator, was grandfathered in as a renewable energy source. Since

that time, various research data has shown the environmental justice impacts on low-income communities of color. In the study conducted by the Michigan Department of Community Health, it was found that the zip code 48201 surrounding the incinerator, and the zip code 48217, where Marathon, the DTE coke plant, and other polluting facilities have the highest rate of asthma in the State of Michigan.

Detroit children bear the greatest burden of hospitalization and death related to asthma than any other city in the State of Michigan. Adults are hospitalized 50 percent more than any other city in Michigan. Asthma rates for children, for children hospitalization is 50 percent higher than those adults. Rates of asthma-related hospitalizations is three times more likely in Detroit. Rates of asthma death are two times higher than any other city in the State of Michigan.

The State has failed, first, to redefine renewable energy minus incineration. The State has failed, second, to determine any actions to reduce the burden on our most vulnerable population, our children. In fact, we have granted subsidies to the incinerator owners that suggests that this outdated energy source is more important than people, especially our children. The

high cost of healthcare for treatment and hospitalization has placed further economic burdens on our families.

The Governor's energy message called for increased recycling within our State, which falls far below other states in our region. This message is a direct contradiction to incinerating recyclable materials. Higher recycling rates can not and will not be achieved if we continue to incinerate valuable economic materials. Thank you.

STEVE BAKKAL: Thanks, everyone, for waiting. Our next four speakers, Doug Boyce, Tecora Kindle, Margaret Weber and Nick Schroeck, please come up to the stage.

MARGARET WEBER: Good evening, and thank you. I am Margaret Weber, Convenor of Zero Waste Detroit, a collaborative of over 20 environmental and civic organizations here in the city.

I want first to respectfully state that it is gravely disappointing that the Governor himself is not present today for this forum. Any decisions that he will make as Governor will greatly impact Detroit residents and citizens. He has just taken a decision to appoint an emergency financial manager for Detroit, creating the impression that he does not have confidence in Detroit's locally elected government. It would be

more respectful of Detroiters if the Governor were present today when Detroit residents expressed their concerns and experiences related to energy. He is missing the opportunity to hear directly what he may not know.

Regarding energy policy, I urge the Governor not to invest or subsidize waste-to-energy or incineration as a renewable energy. This city has direct experience with the high cost of WTE; 20 years' debt obligation has cost us, the taxpayers of this city, over $1.2 billion. Detroit is just beginning to recycle, a goal that historically has been impeded because of a previous investment in and debt obligation to the building of the incinerator at I-94 and I-75.

That debt obligation is behind us, but I emphasize that Detroit still lives with the effects of that cost. The $1.2 billion could have been used for other more sustainable investments, and Detroit could be further along the Governor's goal for recycling. We could have had investment in the waste stream as commodities that create businesses, builds business, create jobs, and create new materials.

We urge the Governor to be very mindful of choices. Waste-to-energy directly competes with his recycling goal. And make no mistake about it. In

practice, one or the other will have an investment priority. We in Detroit know and we urgently urge him to make the priority recycling.

Finally, I conclude with a request. Citizen groups such as Waste, Zero Waste Detroit have related directly to all successive mayoral offices and city councils. With Mr. Orr in the position of emergency financial manager, it is not at all evident how citizen input can be given or that it will be valued. Related to recycling, we know from our experience that citizen input was critical and central to the emergence of a Detroit recycling program. How do groups that have constructive sustainable ideas share them with Mr. Orr?

And therefore, we respectfully request that the Governor give us contact information for Mr. Orr's office. Thank you.

NICK SCHROECK: Thank you for the opportunity to be here. Nick Schroeck with the Great Lakes Environmental Law Center.

I'd like to speak today, though, as a citizen of southeast Michigan, a ratepayer, and a Detroit Edison customer, in fact a GreenCurrents customer, so I pay a little bit extra money every month so we can all enjoy some more renewable energy. You're welcome. I'm also a Consumers Energy customer for natural gas.

And I'd like to talk a little bit about one factor that I don't think has been brought very much today, and that's the age of the Detroit Edison coal fleet. We've heard a lot about our dependence on coal, the cost of that coal to our environment, to our public health; but, you know, that coal is even worse here in Michigan because the facilities that are burning it are aged, and in fact, they're out of compliance with certain sections of the Clean Air Act dealing with (inaudible) capacity.

I was lucky, I was fortunate, I grew up in an area where I didn't know what a coal plant looked like; in fact, my elementary school was down the street from a cider mill, you know, it looked like a Pure Michigan ad. But there's a lot of little kids who go to school every day next to that incinerator, there's a lot of little kids who go to school every day next to Trenton's coal plant or River Rouge's coal plant, and they don't know what anything looks like other than that soot and that smoke; and we're all benefiting in some way from those kids' suffering, and that's something that this State needs to take a look at. It's a question of equity, it's a question of justice, it's a question of fairness.

So while my technical comments will focus

on increases in renewable energy and increases in energy optimization efficiency, I want to make sure that for those folks that aren't able to speak here today, we know that there are significant impacts to people in these communities where our electricity is coming from here in the DTE service fleet. We need to clean up those facilities so those kids can have a chance at achieving everything that's their God-given right. Thank you.

STEVE BAKKAL: Thank you. Our next four speaker are Brad Klein, Ryan Naibach, Frank Schulmeister, and Nanam Seubert, so if you can come up to the stage.

And again, for the people in the lobby, there's plenty of room in the auditorium, so feel free to come in. We have four no shows.

Very well. Our next four, Bill Ghrist, Tim Luke, Michelle Martin, and Nicole O'Brien.

BILL GHRIST: Mine will be fairly short and sweet. I'd like to start off by thanking Chairman Quackenbush and Director Bakkal. My name is Bill Ghrist, I am the energy manager for Washtenaw Community College over in Washtenaw County.

I'm here today to express our need to see the energy Choice cap be lifted. It is something that we've been one of the individuals in the queue for probably greater than two years, and it would really

benefit us to be able to switch over. This would allow all users presently in the queue to have the opportunity to negotiate for the fairest price of electrical energy.

WCC presently spends approximately just a little under $2 million of our electricity, towards electricity out of a $94.1 million budget, so it's a significant portion. Reducing our electricity costs combined with energy conserving measures would allow us to redirect budget dollars to educational needs, as well as other technologies used to further reduce our overall energy consumption.

WCC sees House Bill 5503 as a viable solution for many businesses currently in the State, as well as future businesses, to control energy costs which has become an ever-larger portion of our operating budgets. We ask that the Governor, Public Service Commission, and the state legislators work collaboratively and expeditiously to improve the energy costs and policies so that the great State of Michigan can move forward and prosper.

We also have developed a number of programs at the Community College which has helped us to be able to improve our energy efficiency. Every building that is constructed presently or renovated is done to LEED Gold Certification or better. We also have been

implementing many energy efficiency programs, such as variable frequency drive for our HVAC and also LED lighting across much of our campus. And finally, we have also, our president has become signatory to the Collegiate Presidents Climate Action Plan, which is designed to help reduce our greenhouse gas inventories and improve the overall operation.

And one last note, we do also have developed an entire curriculum for the environmental sciences program which ties into developing our future students and the future employees that will help to improve the overall economic climate.

So thank you.

NICOLE O'BRIEN: Good evening. I'd like to start off by thanking Commissioner Quackenbush and Director Bakkal for this opportunity to talk here today and discuss what I feel is a monumental issue facing each and every resident of our great state.

My name is Nicole O'Brien, and I'm here with the Clean Water Action, but I'm also here as a mother, a mother who's immensely concerned about our effects on the environment and the mess that we've created for our children.

The focus today is on Michigan's energy future. What paths should we take? Where should we

invest our money and resources? And what needs to change?

I'm not going to stand up here and claim to have all the answers, but I do know that protecting our environment should be on everyone's agenda, republicans, democrats, greens, liberals, conservatives, constitutionalists, everyone. We need to stop using our planet as if it were -- as if we had another one. We have only one earth, one home, and so we need to encourage policies that protect our environment for future generations.

Investments in renewable energy, energy optimization, and energy education are imperative. We need to move away from dirty energy, because coal plants are simply too damaging to our planet. Instead we need to promote cleaner and renewable resources, such as solar and wind. We must make these changes to protect public health, future generations, and to boost Michigan's economy.

When deciding which form of energy we should invest our money in, one aspect we must consider is cost; and according to the MPSC's report on the implementation of Public Act 295 which was released on February 15th year, the cost of a new conventional coal plant is $133 per megawatt hour, whereas the cost of a

renewable energy standard is $82.54 per megawatt hour. By choosing a renewable energy standard, the result is a $50 difference in savings per energy hour. With the additional savings of energy optimization standards now in effect, there's an even greater return on investing in renewable energy. With the renewable energy standard and the energy optimization standard combined, the rates are lowered to $45.98, which gives the investors an overall savings of $87 per megawatt hour. To me it seems the only logical choice is to focus new investments on renewable energy and energy optimization. Not only is it a more responsible choice, but also more cost-effective solution.

Michigan must continue making strides to improve our renewable energy standards. We must expand financial incentives for customers, and encourage Michigan residents to become more energy efficient. This will not only help to improve the quality of our environment, but it will also help to create jobs.

Along with policies encouraging renewable and optimization, we must also focus on energy education. People of all ages need to have a better understanding of our energy uses and waste. We should take a look at the U.S. Department of Energy's energy literacy program as a guide. The goal of this program is to empower

individuals and communities to make more informed decisions.

In a perfect world, we would all work together to ensure that new policies facilitate energy optimization and renewable energy investments. Protecting our environment should have never been and never should be a partisan issue. It is simply the right thing to do.

We did not inherit this earth from our ancestors, we are borrowing it from our children. We must evolve and we must move away from our reliance on dirty energy and energy waste. It is time to focus our efforts on clean, renewable and efficient energy resources. We have a moral obligation to future generations to make the health of our environment the top priority.

Thank you once again, Director and Commissioner, for bringing us all together to discuss this critical issue facing our Great Lakes State.

STEVE BAKKAL: We're going to keep going until 6:00 p.m. I think we've gone through about 45 requests, with some no shows in between.

Next four speakers Gail Barber, Tracy Oberleiter, Louis James, and Ahmina Maxey, if you're still here.

GAIL BARBER: Thank you, Director and Commissioner. Thank you, ladies and gentlemen. My name is Gail Barber, I live in Southfield. I'm not affiliated with any organization. I'm a retired school teacher, small business owner, and now an organic farmer, fifth generation farmer and third generation owner and operator of a farm in Illinois.

I'm also the proud owner of 43 photovoltaic panels on my home in Southfield. Ask me what my electricity bill has been for 22 months. Thank you, DTE, for the SolarCurrents program. I wish more people on my block, that's what I envisioned, could have more panels.

I'm here today, it is my intent to share data and suggestions that pertain to the content of Question 10 supplied by the Commission: Renewable energy as it pertains to the cost comparisons for different types of energy production, specifically, the extraction of the natural gas via hydraulic fracturing and horizontal drilling. I'm going to address the health costs, and I'd like to thank all the speakers before me who have addressed the health issues, and everyone really. I've learned a lot from the interesting, creative minds that are at work here, even especially us left handers.

It's my understanding that Governor Snyder has asked for increased production of natural gas in Michigan. I could not disagree with him more. For the record, I request that Governor Snyder, the state legislature and the Michigan Energy Office, in the process of determining how energy will be produced in this State, place a ban on or, at the very least, a moratorium on all hydrofracking until all environmental and human health costs and risks have been made transparent.

In support of that request, I am submitting data from the work of Dr. Sandra Steingraber, S-t-e-i-n-g-r-a-b-e-r. I know you're all brain dead by now; go home, when you have some energy, and Google Sandra Steingraber, an internationally recognized authority on the environmental links to cancer and human health.

Dr. Steingraber, with whom I've had the distinct honor of working, is a biologist, author, a highly regarded public speaker, and a cancer survivor. She is the author of three highly acclaimed books: "Living Downstream: An Ecologist's Personal Investigation of Cancer and the Environment", which has been made into an award-winning feature length documentary; "Having Faith", her second book, writes of

her own first pregnancy, brilliantly describing the month-by-month unfolding of embryonic organs and the alarming extent to which environmental hazards, including the toxic cocktail mix of industrial poisons, such as those found in hydrofracking, now threaten each crucial stage of infant development. Her third books, "Raising Elijah: Protecting Our Children in the Age of Environmental Crisis", in which she describes the endocrine disrupting and the neurological damaging impact synthetic chemicals have on the developing systems of children.

In the past five years she has immersed herself in the hydrofracking conversation, working tirelessly not only in her home state of New York, but all over this country and Europe, in an effort to prevent the hydrofracking industry from taking hold. I believe her volume of writing is a much needed addition to the debate in this State on what our energy future should look like.

To this end, I have submitted to the Commission the following three items written by Dr. Steingraber:

1. A letter to the New York Governor Andrew Cuomo, undersigned by 135,000 cancer survivors or people who have been acquainted with cancer survivors --

with cancer diagnosis, excuse me, requesting that he consider the cancer risks and the associated terrible costs when conducting a comprehensive assessment of potential health impacts due to fracking.

Quickly I will read a couple of statements. My time is up.

Her second article -- let me finish -- an article entitled "The Whole Fracking Enchilada", in which she states that she believes that extracting natural gas from shale using hydrofracking is the environmental crisis of our time.

Her third article, "Cancer in the Ransom Note", which I will quote, is an expansion on the report titled "Fracking: The New Global Warming Crisis", written by the Food and Water Watch. I quote her: We do not consent to the delivery of our drinking water into the radioactive bowels of the earth. We will not negotiate with those who think additional -- that additional cases of leukemia, bladder, colon, lung and prostate cancer are just part of price you pay for gas. Tear up the ransom note. Find another energy plan. Set a sustainable course.

I conclude by asking the leadership of this State, a State made up of over 10,000 lakes inland, surrounded by the magnificent Great Lakes, which make up

a third of the fresh water in this world waiting to be portals for toxic extermination, to lead us away from this toxic cancer-causing industry into a clear, clean sustainable and economically viable energy production. Thank you very much.

AHMINA MAXEY: O.K. Good evening, everyone. I'll try to keep this to three minutes, so I will -- I'm sorry -- I will keep it to three minutes. So my name is Ahmina Maxey, I'm with the Zero Waste Detroit Coalition. I'm here to talk about the renewable portfolio standard.

We as a coalition support renewable energy in the State. It can bring jobs. We want more investment in the economy. We support true forms of renewable energy; wind, solar.

One form of renewable energy that's classified as renewable that we do not view as renewable is waste-to-energy. Waste-to-energy, if you look at the facts of the waste-to-energy industry, not the talking points, but the facts, consult the research, consult studies, you will find that it is not a form of renewable energy. Waste-to-energy is extremely costly. The operations and maintenance costs are 10 times greater than coal, and four times greater than nuclear. In addition, incinerators emit more greenhouse gases, more

carbon dioxide per unit of electricity than coal-fired power plants. Incinerators emit 2,988 pounds per megawatt hour, compared to coal-fired power plants at 2,249.

So when we talk about renewal, we talk about improving the quality of life, the environmental conditions in our State, waste-to-energy is not the way forward. There are states throughout the nation that do not include waste, municipal solid waste generation in their renewable portfolio standards, so Michigan will be joining that group; states including New York, Arizona, Delaware. One state, the State of New York, when an incineration company attempted to have municipal solid waste included in their renewable portfolio standard, the New York attorney general, Eric Schneiderman, in 2011 opposed their request, citing multiple reasons, including energy from combusting municipal solid waste is not renewable. Claims that waste-to-energy result in net removal of greenhouse gases from the atmosphere is unsubstantiated and scientifically uncertain. These are direct quotes from their attorney general. Subsidizing construction of new waste-to-energy facilities threatens the state's ability to reach greenhouse gas production goals.

Essentially, when it comes down to it, if

you are burning fossil fuels, you're burning plastic, you're burning paper, you're burning things in a waste-to-energy facility, that is not renewable, that's not how we view it, and so we really would like the State to take that into consideration when going forward with its renewable energy policy. Thank you.

STEVE BAKKAL: Our next speakers, Nancy Davis, Dean Sousanis, Henry Newnan, and Thomas Reinke. Anyone still here?

NANCY DAVIS: I'm Nancy Davis. I want to thank you for allowing us to express our comments today. Mine are going to be on the potential of clean energy and the necessity of transitioning with the utmost urgency to clean energy in order to improve public health and create new jobs for Michigan.

As a former city council member in Orchard Lake, I was shocked to learn that our fish in Orchard Lake were contaminated with mercury. I was even more taken aback to realize and understand that all Michigan's 11,000 lakes have -- were issuing a fish consumption advisory by the State of Michigan. I wondered what was going on. It was really horrifying to realize that coal-burning power plants were the major source of this contamination. That was over 13 years ago. Unfortunately, the problem's gotten worse and the

levels of mercury are rising in State. I just talked in fact to someone from DEQ the other day. Tragically, coal-burning power plants still rely on coal to produce 60 percent of electric power. Now, throughout the United States and Michigan, one out of six women have elevated levels of this potent neurotoxin in their blood.

In addition, Michigan's spends nearly $2 billion to import coal to Michigan, and then also spends an additional 1.5 billion every year in healthcare costs directly linked to burning fossil fuels. This is according to the American Lung Association. The cancer rate in metro Detroit is 200 times higher than acceptable levels, according to the EPA.

While coal is more polluting, all fossil fuels, gas and oil, are also dangerous; they contain some 300 carcinogens, like arsenic and sulphur dioxide, that are directly linked to cancer, asthma, heart and lung disease. And recently you probably heard that the World Health Organization found diesel exhaust to be cancer-causing. 41 percent of Americans suffer from dangerous levels of pollution; they live near those areas.

Is fracking the answer? No. When every well is fracked, up to 8 million gallons of water is used, much of it is sent, you know, two miles underground

and it doesn't come back up, all of that fracking water is contaminated with chemicals. So in a sense, it's all ruined. How can our State afford to lose that good surface water? And each well can be fracked up to 18 times.

Is nuclear the answer? Not with the history of accidents, near meltdowns, and no safe storage for the dangerous waste.

So let's go to clean renewable energy. I have and hope and pray that Governor Snyder will have the courage and insight to take Michigan into a clean energy future that studies have shown will create 44,000 new jobs. Already over 100 solar companies call Michigan home, and we rank fourth in the capacity to produce wind.

Just one final comment. Up in the U.P. they found, studies found, I think it was by Michigan State, that there is the capacity in four or five different places in the U.P. to create the equivalent of 300 Fermi 2 nuclear power plants; and this way they could be placed out of tourist views and also bird migratory paths.

At a time when world population is growing exponentially, adding one billion every 10 to 13 years, action is needed now. Now is the time to have the courage of our ancestors to take a stand and protect

future generations. Our ancestors puts their lives on the line to defeat powerful dictators, monarchs and slave holders; and now is our time to stand up to entrenched interests and lead the world to clean, safe energy. Thank you.

ANNE SOUSANIS: Thank you. Nice to be here this afternoon. My name is Anne Sousanis, I am from Lapeer County. My comments kind of tack on to what was just said.

I have a concern regarding fracking for natural gas, and I'm referring to unconventional high-volume, slick-water hydraulic fracturing by horizontal drilling in multiple well pads. That's a mouth full of words and it's a very complex issue that has a lot of potential impact for our community, for our public health and safety, for our water, and beyond that.

As was just said, this is a process that uses millions of gallons of water, millions, that can never go back into the water cycle. And in part, because they have been mixed in with many different kinds of chemicals, some of them are considered proprietary or secret, and some of them are very toxic, even in very small amounts. At the other end of the process, there's a concern regarding the injection wells, the wells where the waste water has to go as it comes back up from this

process, it has to be stored somewhere. It is further contaminated with heavy metals, naturally occurring radioactive materials. There's a big concern about that.

In a lot of the research I've done, in the meetings I've been to, there was concern expressed all the way through for the need for more information, for baseline data, for regulation, even as the permitting, the leasing and the drilling are going on. And they're far ahead of the science and the knowledge and the public involvement, that's why a meeting like this is so important, and we need more of them so that we can all get informed.

We have alternatives for fossil fuel to produce energy. We don't have an alternative for clean water. We need to put our effort and funding into alternative clean energy technology and implementation, as well as energy conservation and efficiency.

That slogan we have of Pure Michigan, we need to keep working to keep it that way. Thank you very much.

DEAN SOUSANIS: I go with her. I'm Dean Sousanis from Lapeer County. I've been teaching physics for 48 years.

Yes, I'd like to see renewables. I'm quite worried about, the same as we were for waste 50

years ago, with nuclear, we still don't know what to do with it, and I think there's a good chance injection wells might be worse yet. They're real time bombs.

But on the supply side, it's really interesting to hear everybody talk about, you know, the different restructurings, the different sources of energy.

I want to talk about the demand side; a little bit out of the box, a little bit long term. When I was eight years old, I took a bus from my Pontiac house down to the street car on Saginaw and went to visit my aunt in Detroit by taking another transfer, another bus, and going to another side of Detroit. So I moved around pretty good before I could drive. And now I'm at the age, over 70, where I'm not, a lot of people would rather not have me drive.

I've got to tell you, I spent no less than 10,000 a year, because I know our family, both of us drive more than 20,000 a year, on a really big piece of energy, and that's of course the automobile on the roads. And, you know, the two biggest issues in this area in Michigan, Pure Michigan, which I really kind of believe in it because I think that's a wonderful thing, that brings democrats and republicans together, are the roads and Detroit.

And it seems to me, when we've been talking about all these choices, one of the choices that I no longer have and my kids don't have, I've had to drive them everywhere, is transportation choices, and that is a monster energy thing, and that's something that can make Michigan and Detroit maybe a good place to go. You know, we visit Toronto, we visit New York, we visit cities like Chicago that have many different ways to transport ourselves. We are not an efficiently disbursed or connected state. And if we can improve our lakes and our (inaudible) with each other, we might actually be able to not only move around more efficiently, but also get along a little better and take advantage of our State a little better.

It's quite a trip for us to come down here from Lapeer to here and do this or to go to the Fisher Theater or to whatever. This could be a much greater city if we had better ways for us to go to Ann Arbor or go to Lansing or go to -- which we try to do, rather than take cars, and the cost of the cars is just too much and, you know, we talk about it like a given. I think that we need more choices on transportation, and that would solve both a number of problems, and it's way more energy efficient, way more safe, and I think it would be a good reason for people like my own son, sons

actually who live in cities with great transportation of all kinds.

And the car companies no longer, I don't think they're as identified as they'd like to be with Michigan anymore. I mean I grew up at a time when everybody in Pontiac bought a Pontiac. I hope those days are gone. I'd like to see the car companies and DTE and everybody else support more transportation. That would really save energy more than anything. Thank you.

THOMAS REINKE: This is a huge honor. Thank you, all, for staying, and thank you, Director and Commissioner, for having all of us out here to speak our mind. I think it's important that we all group together to show the Governor that we really mean business and we're tired of lip service.

My name is Thomas Reinke, I am an underemployed mechanical engineer which drove me to start a renewable energy company here in Michigan. That also makes me a job seeker, a tax payer, a utility ratepayer. I'm also a supporter of Clean Water Action, Sierra Club, National Wildlife Federation, American Wind Energy Association, National Renewable Energy Laboratory, Michigan Clean Business Association.

You know, we may not purchase energy from other states, but we do purchase over a billion dollars

worth of coal and natural gas, which is not common to other states. That gives us a huge competitive disadvantage.

There are many reasons that we should promote a strong wind or renewable energy policy in our great industrial State of Michigan; this can be accomplished by supporting residential, small commercial, industrial wind energy generating systems. Some of us already know about the huge potential that we have here in Michigan that was mentioned, the sunlight that we have, the 22 mile an hour wind speed that we have around the Great Lakes. We already know that. In addition to supporting the utility companies' or owner-investor utility companies' efforts to install and commission commercial wind generators as a way to reduce carbon emissions that greatly contribute to climate change, global warming, we need to continue to increase our energy generation to support manufacturing and residents. That's really no secret.

Our plan to be, all of our plan should be to provide incentives that are equal to or comparable to other states. We don't have that. Those incentives should be provided to farmers, business owners, educational facilities, manufacturing facilities, and residents, to install equipment on site or as close as

humanly possible to that site to eliminate energy loss through generation, the distribution and transformation of this power that creates health benefits, as I recently, I learned at the, learned earlier today, and also reducing that transmission through our existing failing interconnected grid system.

What is this going to do? This is going to create jobs that can not be outsourced in every single city in the State of Michigan. These jobs are going to include crane operators, engineers, mechanical, civil, electrical engineers, heavy equipment operators, cement companies, electricity manufacturing companies, building and safety officials, general labor, skilled and unskilled, equipment service technicians, part supply companies, distribution companies, trucking and logistics, mechanics, maintenance personnel, these are all very good paying jobs.

What the heck happened? Detroit, Michigan, used to be the place where every, where people came from all around the world to make a better place for themselves and their family. Did we give that away for greed and profit? How do we get these jobs back? I recently learned yesterday that even our unemployment compensation as of December 31 will be cut by another 10.7 percent.

I want to thank you all for having me today. It was a pleasure to be here. Thank you for all of your, all of the efforts, all of you came a long way. And thank you again.

STEVE BAKKAL: All right. We're getting kicked out. Next four speakers, Loch McCabe, Jason Coridae, Milan Stevanovich and Douglas Myers.

LOCH McCABE: Thank you, Commissioner Quackenbush and Director Bakkal, for making this opportunity available for us to share some additional thoughts to help make it easier for decision-makers in Michigan to be both more effective and wiser. My name is Loch McCabe, I'm president of Shepherd Advisers. We're a growth and market research firm, and we have actively worked with Michigan energy entrepreneurs, utilities, nonprofit organizations and government entities for the last dozen or so years. And I personally, like many of you, have both a personal and professional stake in what emerges from this process.

I'd like to offer the following thoughts. You've heard many, many, you know, much good information today that helps provide a solid technical, economic, environmental, and justice set of reasons as to why building more and more energy efficiency with renewable energy should be central to Michigan's energy future. I

want to offer three additional strategic economic growth reasons that energy efficiency and renewable energy should be embraced by the State of Michigan.

First, energy efficiency and renewable energy create a firmer foundation for future jobs. The fixed-price nature of energy efficiency and renewable energy provide an increasingly important price hedge, as we've heard earlier today, that the State can actually use I believe to bend the arc of Michigan's energy prices and be able to bend that arc downward over time. Imagine what it would be for the State if the State could begin to promise Michigan companies a range of energy prices in the future by mixing and optimizing its portfolio of energy efficiency, renewable energy, as well as fossil fuel energies. Imagine if the State could begin, through more effective planning, to lay out a course by which businesses would know for a fact that their energy prices would be declining over time. I believe that would not only help Michigan businesses that are already here plan more effectively for the future, but that would create a tremendous competitive advantage for bringing companies in from other states.

And, you know, we're fortunate in that Michigan is, from an energy perspective, somewhat of an island. We consume the energy we produce, we produce the

energy we consume, so we have the ability to control what happens in the State, and similarly, we have an abundance of solar, biomass, and wind energy and, of course, plenty of energy efficiency opportunities to actually be able to do the calculations and I believe bend the curve.

Secondly, the Governor has rightly placed a very high priority on doing things to keep the kids, keep our kids in this State, both kids that grow up here as well as ones that come to our great universities to study. The reality is that most young kids are striving to go to places that are cleaner and have more vibrant futures. Energy efficiency and renewable energy, these sectors are amazingly vibrant. As we speak, hundreds of companies, large and small, and thousands upon thousands of very bright people are actively trying to figure out ways, better and better ways to generate, store, manage, deliver and pay for energy, for cleaner energy.

We should be tapping into this, we should be fully embracing energy efficiency and renewable energy; because along with that not only come the Btus and the kilowatts, but come a whole slew of new emerging economic possibilities, possibilities that we can use to help create wealth and create jobs, Pure, indeed a Purer Michigan.

And finally, and I would argue, we have

no choice. Bit by bit cleaner energy is coming. The current fossil fuel world in which we live is, it's very much around today, but it's not -- its days are numbered, and more and more places around this country and around this world are actively shifting to a pro clean energy strategy, and no one, to my knowledge, is turning back. No one is saying, hey, we want to ditch the renewables, ditch the energy efficiency, and go for more coal. I think this is part of a trend that we have a great opportunity to not only be aware of and tap into, but to actively embrace. I believe we should stop fighting it and get on board, let the train work for us and let's go.

The Governor asked that the decisions that the State make be adaptable for different possible futures, he asks that we have no regrets, he says the rewards for making the right decisions are tremendous, and I agree. I urge the State to go with the rising clean energy tide instead of against it. Indeed, let's help push it along and reap the wealth creation, job creation, and Pure Michigan benefits that come with it. Thank you for your time.

JACOB CORVIDAE: Surely the ability to sit through long hearings must be a job requisite for being a public sector commissioner and policy advocate, so thank you for staying. My name Jacob Corvidae, I am

with WARM Training Center, it's not hot or cold, but WARM, and the president of the Southeast Michigan Regional Energy Office.

And I just want to make three points I have not heard yet today. The first is WARM has a 32-year history of working with affordability and energy efficiency, and I want to really drive home the point that affordability does not equal cheap rates. I have never heard a parent say, oh, my kid's just got into college, it's the cheapest one we could find. Right? We're looking for value with affordability, and I think it's a really key factor we need to keep in mind when we talk about affordability.

So I specifically have two points related to that that I'd like to drive home. One is that I would like to see us move towards policies that incentivize actual energy savings, not mere outputs of activities taken. We know that energy modeling is at best a loose art, it's a useful tool, but it is not a perfect tool, and we would like to see data and incentives based on the actual energy reductions that people make. As this will incentivize new things, it will have very positive impacts.

WARM had an independent study done of our energy efficiency programs, seeding tens of thousands of

people with education, and what we found is after about $100 spent per person, those people were able to save over $280 a year in their energy bills. That's an incredible ROI. And that is a sort of measure that is not at all addressed in our current EO programs, because it simply does not fit within the current models. So I'd like to see us (inaudible).

The other thing that I think we could drive this (inaudible). I don't have a strong opinion on Choice versus regulation, I think there's advantages to both; however, any direction we go, I would like to see us push as a State towards transparency on utility data. The Green Button program, advocated by the White House, has been adopted by utilities and sponsored by both utilities and companies around the country to provide safe private ways for individuals to share their utility data in a way that will really drive the market around energy efficiency, and we'd also like to see this integrated with real estate transactions. The Governor specifically mentioned in his address the idea of tackling this with affordable houses, but I don't see any reason to limit it to affordable housing, I think we need to address this for all market rate housing and commercial transactions as well.

The MacArthur Foundation recently

conducted a study which showed that data transparency would drive energy efficiency in multifamily housing specifically, and I think you can extrapolate that to other sectors. So those are my main points. Thank you very much for your time.

DOUGLAS MYERS, JR.: I'd just like to say good evening, because we been here for a long time, but it's been a very important topic, so I want to thank everyone for giving me the opportunity to speak. My name is Douglas Myers, I'm the founder of the Feed Da Streetz Tour, it's a nonprofit organization comprised of musicians that represent blighted and stressed communities. I'm also here on behalf of the Sierra Club and also River Rouge Promised Neighborhood Initiative, and I represent the downriver area, and I'm a citizen of River Rouge, and I also am a DTE paid, I pay my bills every month just like everybody else do.

But I would like to thank Governor Snyder and Directors Bakkal and Quackenbush for the opportunity to speak on this important topic.

I would like to talk to you guys today about facts and the awareness, that citizens need to understand the transition from the antiquated solution that they have now to cleaner energy solutions.

As far as cleaner energy, it starts with

every one of us and our agendas on what we're going to do to make the change. We feel as though if we built a proper awareness, and probably even have a curriculum inside of some of the schools that children can actually identify where the coal-fired power plants are, they can identify the colors of the water that's not normal, things of that nature. I had an opportunity to go out into the Detroit River with the Sierra Club, and I saw the differences up close and personal. It gave me a very, very good understanding of what we need to do to make a change. I feel like that understanding what solar energy can do for our community is going to help us grow.

Obviously scientific research tells us that the pollution from outdated coal plants in the community is contributing to childhood asthma attacks, and also contributing to heart and lung disease, and even premature death, as well as premature birth. These issues hit close to home to me because I have a son that was born prematurely, and we live in that area. These issues also hit close to home to me because I have a mother that has ovarian cancer (inaudible), and she's moved out of the area to another area so that way she can survive a little bit longer. My father died when he was 59, and he's from that area, and he died of a heart attack, he had a heart attack.

I feel as though our State should embrace a cleaner energy initiative, one that would reduce pollution in our air and our water.

Now, a lot of people talk about the facts and they put out specific numbers and things of that nature, but I feel as though you can not put a price on your life, you can't put a number on your life; I think your life is more important than any amount of money that's on this planet. I feel as though -- thank you. I feel as though based on what I've witnessed here today, there are various opinions and vantage points in regards to different solutions for the development of cleaner energy.

One vantage point which I spoken to you about earlier is I'm a resident of downriver and I'm here speaking on behalf of my fellow downriver residents, particularly in the southwest Detroit area and River Rouge, Michigan. We are surrounded by antiquated technology that threatens the existence of our generation and our offsprings.

There was mentioned many decisions and discussions about the amounts of money that can be saved, there's also been a lot of talk about the amount of money that can be invested, but nobody has really discussed the amount of lives that can be saved. We talk about the

health issues, but let's talk about if each one of us had an area that we lived in that was polluted, what would we do to save that person's life in that area? I just want to say the amount of pollution that we have in this area has become a threat to our immune system and also threatens our ability to learn and our ability to possibly obtain financial freedom. Knowing that the citizens are unaware of the health concerns that arise due to the antiquated energy system is one of the reasons why I decided to partner with the Sierra Club. We feel as though we would not be doing our part if we just stood here idly and didn't say anything about it.

As far as DTE stating that they're operating within the regulations of the Clean Air Act still doesn't negate the fact that pollutants are damaging our various communities. Regardless of the regulations that they legally abide by, people are still dying, and I guess that's legal. I don't feel that it should be legal based on my personal family experiences.

We intend to do everything necessary in our power to transition and evolve into a healthier lifestyle. Moving beyond coal should be the focus on all of our agendas and all of our hearts.

I have a tremendous amount of respect for everyone that supports the transition from coal to

renewable sustainable energy. Today I can see that we are all united, and it makes me proud to be a part of something that's going to shape a better and brighter future.

Like I said, I'm new to everything that I'm learning today, like I really appreciate all the information that I've obtained. So thank you.

JOHN QUACKENBUSH: O.K. We are well past 6:00 o'clock; we were able to squeeze in more speakers than we thought we could. We didn't get to everybody, and we apologize for that, but we did have about 80 interested speakers, and we have well past 50 in.

So let me just end by saying all the information that was shared today is going to be posted to our website at michigan.gov/energy. We will put -- if you have a prepared remarks that you didn't get to deliver today, please provide it to us, we will post that on the website as well. There will be transcripts available in about 10 days of everything that was said here today. And please, keep submitting your written comments to the website as well.

I'd like to thank a couple people especially today. Well, I'd like to thank the people from NextEnergy for providing this great facility for us today. And I'd also like to thank Steve Bakkal and his

dedication for being here today. You probably don't know it, but he was in the hospital this morning with his wife preparing to have birth of their third child, and Steve is so dedicated, he asked his wife to wait until tomorrow, he wanted to be here with you today.

So anyway, with that, the next Michigan Public Forum for energy will be on April 12 in Marquette, and we hope to see some of you there. Thank you very much for coming today.

(Proceedings concluded at 6:15 p.m.)

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C E R T I F I C A T E

I, Lori Anne Penn (CSR-1315), do hereby certify that I reported in stenotype the proceedings held at the Michigan Energy Public Forum, at NextEnergy, 461 Burroughs Street, Detroit, on Monday, March 25, 2013; and do further certify that the foregoing transcript constitutes a true and correct transcript of my stenotype notes.

Lori Anne Penn, CSR-1315
33231 Grand River Avenue
Farmington, Michigan 48336

Dated: April 7, 2013

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